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## AI Considerations in Tech Career Pathways: Summit Breakout Summary and Analysis

### Introduction

In October 2025, Hawai'i's Tech Career Pathways Summit convened educators, industry leaders, and policymakers to discuss strengthening the pipeline from K-12 through higher education into tech careers. A major focus was artificial intelligence (AI) – how it's already changing organizations, underutilized opportunities, potential risks to guard against, and ways to ensure AI adoption aligns with ethical and community values. This report provides a comprehensive summary and deep-dive analysis of **Breakout Session 3: AI Considerations**, translating the raw discussion notes into a structured exploration of each topic. The goal is to equip Hawai'i's community leaders, executives, and analysts with a thorough understanding of AI's impact and guidance on harnessing it responsibly for the next generation.

AI is transforming how we live and work at an unprecedented pace. Globally, more than three-quarters of <sup>1</sup> organizations now use some form of AI in at least one business function, and the rise of generative AI since 2023 has accelerated adoption dramatically. For Hawai'i – a uniquely interconnected community with strong cultural values – the advent of AI brings both exciting possibilities and important responsibilities. As one education article noted, many local students eagerly embrace AI tools, while educators are striving to <sup>23</sup> catch up and integrate AI in meaningful, ethical ways. Meanwhile, stakeholders see opportunities for AI to help address local challenges (from education gaps to traffic congestion) if leveraged wisely. At the same time, concerns range from misuse of deepfakes and data privacy breaches to ensuring AI doesn't erode Hawaiian values like *aloha* (respect, compassion) and *mālama 'āina* (caring for the land).

The following sections correspond to the four key questions discussed in the breakout session:

1. **AI's Impact on Organizational Operations** – How AI has already changed workflows and productivity, with concrete examples.
2. **Underutilized AI Opportunities in the Community** – Promising uses of AI that Hawaii could tap into across education, industry, and public sectors.
3. **AI Applications to Approach with Caution** – Potentially harmful or unethical AI uses to avoid, and risks that require mitigation.
4. **Aligning AI Adoption with Ethical and Community Values** – Strategies to ensure AI is implemented in a way consistent with our values, including education, governance, and cultural frameworks.

Throughout the report, real-world examples and research findings are cited to add context to the discussion points. The aim is to create a neutral, informative, and in-depth resource about AI – so that any reader, even without prior expertise, can learn about the multifaceted implications of artificial intelligence as discussed in our Hawaii-focused breakout session.

## 1

# 1. How AI Is Changing Organizational Operations

AI has already begun reshaping how organizations operate, both in Hawaii and globally, by automating tasks, enhancing productivity, and enabling new capabilities. In the breakout discussion, participants shared concrete examples of how AI tools are being used in their organizations. This section expands on those examples with analysis and external evidence, illustrating the breadth of AI's operational impact.

**1.1 Streamlining Administrative and Communication Tasks:** One immediate way AI has changed operations is by handling routine communication and documentation tasks. For example, AI email assistants can summarize long email threads or documents, saving employees time in parsing information. Microsoft's new Copilot for Outlook can scan an entire email conversation and generate a concise summary of key points – even summarizing attached documents like PDFs or PowerPoints – for a quick overview

<sup>5</sup>. This kind of AI-driven summarization is highly valuable for organizations that handle large volumes of correspondence or lengthy reports. In our session, one participant noted using AI to “summarize email and a lot of docs,” which reflects a broader trend: modern AI chatbots or assistants can condense memos, meeting minutes, or technical papers into digestible abstracts. Tools like GrammarlyGO and other AI writing aids are also helping draft clearer professional emails and letters. Instead of starting from scratch, staff can input bullet points or a rough draft and let the AI refine grammar, tone, and structure. The result is faster turnaround for communications and more polished outputs, which is especially helpful for those who might not be confident writers. In short, by automating summarization and offering writing suggestions, AI acts as a tireless administrative assistant, **increasing productivity and communication clarity**.

**1.2 AI for Education and Content Creation:** Many breakout participants came from education, and they highlighted how AI is revolutionizing curriculum development and teaching practices. One striking example

shared was using AI to **curate a 6th-8th grade math course for credit recovery**, including generating lesson plans, practice problems, and even rubrics for grading. Generative AI can indeed assist teachers in designing syllabi, lesson content, and assessments aligned to standards. For instance, Khan Academy's experimental tutor "Khanmigo," built on GPT-4, can help draft lesson plans or explain concepts step-by-step for students . Research confirms that generative AI can aid in **course design** by organizing materials

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and tailoring them to student needs; it can even personalize practice exercises based on where learners are struggling . A participant noted their AI tool aligns content to CSTA 2.0 (computer science standards) and current state standards – a task that would be tedious manually. By offloading it to an AI, educators can ensure alignment and focus more on student engagement. Similarly, AI-driven platforms can generate 8 9 quizzes, flashcards, and study guides automatically , which teachers in our community have begun to leverage for faster material creation. One teacher from Hawai'i mentioned experimenting with AI to generate **rubrics and grading comments**, which is consistent with national trends: educators are discovering that AI can draft feedback for student work or create rubric criteria based on assignment descriptions, then the teacher can adjust as needed. This **augments teacher productivity and planning**, giving them more bandwidth to focus on in-person teaching or one-on-one support.

Another educational use-case raised was using AI to **support English language learners**. An example from the session was a concept of a "Magic School" translator – essentially an AI that could act as an interactive language tutor. With generative AI's ability to translate text and have conversations, a student learning English (or any language) could practice with a bot that corrects them gently and explains in their native language. We are already seeing prototypes of such tools: for instance, Duolingo's new AI assistant can 10 carry out conversations and explain mistakes in natural language . In Hawai'i, where many students speak a second language at home (Ilokano, Tagalog, Japanese, etc.), an AI tutor could personalize English

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practice without judgment, boosting their confidence. Thus, AI has changed operations in education by **providing personalized learning aids and automating content creation**, thereby enhancing both teaching and learning experiences.

**1.3 Automation in Drafting and Planning:** Beyond education, organizations are using AI to generate first drafts of all sorts of documents. Our breakout notes mentioned AI being used to draft letters and even legal documents. This aligns with broader industry adoption – many companies now use AI writing assistants to produce initial drafts of contracts, statements of work, press releases, or policy documents. For example, there are AI tools that generate complete **Statements of Work (SOWs)** for projects based on templates and project specifics, ensuring all deliverables and timelines are clearly outlined . By inputting key

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parameters, project managers can get a solid draft SOW that they then refine to fit the client's needs. The benefit is consistency and time saved; what used to take hours of meticulous writing can be done in minutes by an AI, with the human simply editing for nuance or accuracy. Likewise, legal professionals are cautiously exploring AI for drafting contracts or summarizing case law – though human review is essential to catch any errors or jurisdiction-specific issues an AI might miss. In Hawai'i's state government, while there are restrictions on using AI for certain tasks (as noted later), some agencies have experimented with AI to **draft routine correspondence or forms** so staff can process paperwork faster.

In organizational planning, AI's ability to analyze data and generate plans has also been transformative. Participants cited using AI to **create project roadmaps and syllabi**. For instance, a college professor might ask an AI to generate a syllabus for "Introduction to Data Science" covering key topics, readings, and learning outcomes. The AI can produce a plausible course outline in seconds, drawing on countless 7 examples and curriculum standards . The professor then adjusts it to their preferred schedule and texts. Similarly, in businesses, AI can help with project management by turning natural language goals into

structured plans. Modern project management platforms (like Asana, ClickUp, or Microsoft Planner) now integrate AI to **automate scheduling and task generation**. Type a simple statement like “Kickoff meeting next Friday” and an AI-assisted planner will schedule it, notify the team, and even create a task list based on the agenda . These tools also predict task durations, flag possible schedule conflicts, and update

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timelines dynamically . In essence, AI is changing operations by acting as a **co-planner**, taking on the grunt work of organizing information and allowing humans to focus on higher-level decision-making.

**1.4 Creative and Design Applications:** Interestingly, our discussion surfaced that AI is being used in creative domains as well. One participant mentioned **using AI to design rooms in a home (interior design/modeling)**. This refers to AI tools that generate interior design ideas or virtual room makeovers. Indeed, a variety of apps now allow users to upload a photo of their living space and select a style, and the AI will produce an image of the room redesigned in that style. For example, *RoomGPT* is a popular tool that has been used by over 2 million people as a “personal AI interior designer,” quickly reimagining rooms in 15 different themes . These tools use generative vision models to alter wall colors, furniture, and layouts in a photorealistic way, giving homeowners or designers instant visual ideas. For organizations like architectural firms or real estate companies in Hawai‘i, such AI-driven modeling can accelerate the concept phase – generating multiple design options for a condo interior or office layout at the click of a button. It’s a vivid example of how AI augments creative work: what used to require a human designer drafting mockups can now be prototyped by an AI, then refined by the human expert. Beyond interior design, similar generative AI is used in marketing (creating graphics or video mockups), fashion (designing clothing patterns), and media (editing photos, suggesting layouts).

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Additionally, AI as a **coding and scripting assistant** has fundamentally changed operations in tech teams.

This was alluded to in the session (“helped with developers/programming” and “write apps for visual media”). The advent of AI coding assistants like GitHub Copilot and Amazon CodeWhisperer means that software developers can autogenerate chunks of code or even complete functions based on natural language prompts. As of 2024, an astonishing 76% of developers reported using or planning to use AI tools

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in their development process , and Copilot is now used by 90% of developers at Fortune 100 companies

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. These tools can produce code for routine tasks, spot bugs, and suggest improvements. For example, a web developer in Honolulu might use Copilot to quickly generate a template for a mobile app interface or a script to analyze visual media files, then tailor it to the project’s needs. This significantly speeds up development cycles. One study found that GitHub Copilot can generate on average 46% of the code in AI 18 assisted files – essentially acting as a junior programmer that’s always available. In education as well, coding help from AI allows students or teachers to prototype software (like an educational app or a data visualization for class) without extensive programming expertise, as the AI can fill in the technical gaps. This democratization of coding is an operational game-changer: small businesses or schools without large IT teams can create custom software or automate processes by relying on AI helpers for the heavy lifting in code.

**1.5 AI as a “Thinking Partner” and Decision Support:** A more nuanced but powerful change in organizations is the use of AI as a **thinking partner** – essentially leveraging AI chatbots to brainstorm ideas, explore strategies, or provide insights that aid human decision-making. Several attendees remarked that they use AI for “out-of-the-box/external thinking” and as a “thinking partner” when tackling problems. For example, a non-profit director might ask an AI, “*What are some innovative fundraising ideas for a community tech center?*” The AI can instantly generate a list of creative suggestions, perhaps drawing from examples around the world, which the director can then evaluate. This kind of AI-driven brainstorming has 19 become common in many industries . In fact, researchers note that millions of users prompt chatbots 19

like ChatGPT for idea generation weekly . AI can also play devil's advocate or provide an alternate perspective. You can prompt, *"Act as a customer who's dissatisfied – what complaints might they have about our service?"* and the AI will simulate that viewpoint, helping teams anticipate issues. In Hawaii's education setting, a teacher could use an AI to get **lesson plan variations or project ideas**, treating the AI like a colleague to bounce ideas off. One caveat: studies have found that basic AI brainstorming can sometimes yield stereotypical or repetitive ideas (for instance, one study saw ChatGPT repeatedly suggest similar uses

for objects in a creativity test) . However, by refining prompts and encouraging diverse answers, users can co-create very novel solutions with the AI . In summary, AI serves as a tireless consultant: it can't replace human judgment or deep contextual knowledge, but it can surface information and options at a scale and speed that enhance human decision-making. Organizations that embrace AI in this capacity often find it **expands their strategic thinking** and injects fresh perspectives that might not emerge otherwise.

**1.6 Summary of Operational Impacts:** To synthesize, AI has altered organizational operations by:

- **Automating routine tasks:** summarizing emails/documents, scheduling meetings, drafting common documents – reducing manual workload and errors .
- **Enhancing content creation:** generating educational content (lessons, quizzes) , marketing copy, design ideas, code, and other materials, which accelerates production cycles. •
- **Improving decision support:** analyzing data to make predictions (e.g., project timelines, customer behaviors) and offering suggestions that inform human decisions .
- **Personalizing user experience:** enabling one-on-one tutoring, language translation, or adaptive learning for students; customizing customer service responses in business, etc. 4
- **Augmenting creativity and innovation:** acting as a collaborator in brainstorming and design, providing a wellspring of ideas or prototypes that humans can then build upon .

It's important to note that all these benefits assume a human in the loop to review AI outputs. Our breakout discussions emphasized that while AI can draft or propose, **human expertise and oversight remain crucial** to ensure quality and appropriateness. For instance, a teacher will always need to verify an AI generated lesson for accuracy, and a manager must verify that an AI-written email conveys the intended tone. When used thoughtfully, AI essentially **rewires workflows for greater efficiency** – as a McKinsey survey observed, organizations seeing the most value from AI are those redesigning processes around these tools and training their people to collaborate with AI . Hawaii's organizations, from schools to startups, are just beginning this journey of integrating AI. The concrete examples shared in Breakout 3 show that even in 2025, we have compelling use cases locally. Next, we turn to potential uses of AI that our community may not be fully leveraging yet – opportunities on the horizon that could further transform Hawaii's tech landscape.

## 2. Promising AI Uses Underutilized in the Community

While many Hawaii organizations are experimenting with AI, our breakout identified several promising applications that are **still underutilized in our local community**. These range from ideas in education and workforce development to addressing pressing social and environmental issues. In this section, we will explore each of these ideas, explaining what they entail and how they could benefit Hawai'i if implemented. The analysis draws on examples from elsewhere and aligns them with local context, providing a roadmap of

opportunities for community leaders and innovators to consider.

**2.1 AI Labs for All Professions:** One broad suggestion was to establish **AI Labs accessible to different professions and sectors**. The idea is that professionals (teachers, healthcare workers, farmers, etc.) could collaborate with technologists in an AI-focused environment to brainstorm and prototype AI solutions tailored to their field. In practice, this could look like a physical lab or a virtual hub where, for example, educators work with AI experts to create tutoring bots for Hawaiian history, or farmers work with data scientists to apply machine learning for crop management. Similar concepts exist in tech-forward regions – for instance, some universities have “AI innovation centers” where industry partners come to work on proof-of-concepts. For Hawai‘i, an AI Lab network could democratize AI: it would send a message that AI isn’t just for software engineers, but a tool *every profession* can leverage. Doctors could experiment with AI diagnostics using local health data (within privacy safeguards), architects could use AI-driven generative design for sustainable buildings adapted to our climate, and so on. By fostering cross-pollination of ideas, these labs would likely produce new solutions attuned to island needs. Additionally, they could host training workshops, boosting **AI literacy** across professions – a point raised in our session (the need for general AI literacy and utilization skills). The outcome would be a workforce that not only uses off-the-shelf AI tools but also contributes to developing AI applications relevant to Hawaii’s unique context (cultural, geographic, economic). This kind of inclusive innovation ecosystem was seen as underdeveloped locally, and establishing it could keep Hawaii on the cutting edge.

**2.2 Localized “Island” AI Models and Data Repositories:** Another underutilized idea is creating an **island wide data repository or AI models trained specifically on Hawai‘i data**. Participants referred to an “Island database/credential training.” This can be interpreted as assembling local datasets (e.g. on tourism, traffic patterns, ocean data, Hawaiian language, public health, etc.) and using them to train AI systems that understand our context better than generic AI. For example, imagine an AI that knows every street and bus

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route on O‘ahu and can thus provide highly accurate traffic management suggestions or personalized transit directions. Or a chatbot trained on Hawaii’s government services information and cultural norms, able to answer residents’ questions with local understanding. Currently, most AI systems are trained on global internet data, which might underrepresent Hawaii’s specifics – leading to gaps or inaccuracies when applied here. By investing in local data curation (perhaps through a state open data initiative) and **developing AI “made in Hawai‘i”**, we could unlock uses like: predictive models for volcano or weather events, AI that helps plan land use with sensitivity to cultural sites, or even tourism recommendation engines that promote local businesses and respect community guidelines. Additionally, “credential training” might refer to upskilling local workers with certifications in AI data handling or model training, thereby building capacity to maintain these systems. One example of local AI is efforts in New Zealand to create Maori language AI assistants – similarly, Hawai‘i could develop AI conversant in *‘Ōlelo Hawai‘i* (Hawaiian language) to aid in language revitalization or provide government services in Hawaiian. In short, this opportunity is about **building AI that is by and for Hawai‘i**, rather than relying solely on mainland or foreign AI solutions. It remains underutilized largely due to resource constraints and the need for collaboration between government, UH (University of Hawai‘i), and industry to aggregate data and expertise. But the payoff could be AI tools that are more relevant, trusted, and beneficial to our community.

**2.3 AI for Workforce Development and Closing Skills Gaps:** Many participants saw promise in using AI to **create more jobs and support new kinds of work** in Hawaii, rather than replacing jobs. One angle discussed was using AI to help individuals offer freelance services or start small businesses. For instance, someone with a craft or skill could use AI to handle the “business” side – writing professional emails to clients, managing bookkeeping, marketing on social media with AI-generated content – thus enabling more **solopreneurs and freelancers** to thrive. A concrete example: a local artisan could use an AI tool to draft product descriptions and customer responses in perfect English, overcoming any personal language barriers and appearing as professional as a large company (the breakout specifically noted AI’s help in

writing “clear professional emails”). Similarly, a family-run tour company could employ AI to manage bookings and generate engaging tour itineraries customized to each customer’s interests. By improving professionalism and efficiency, AI can level the playing field for small businesses in Hawai‘i to compete and scale up. Indeed, surveys show a majority of small businesses see AI as essential to stay competitive, with 27

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82% of those using AI having expanded their workforce (hiring more people for higher-value roles) . This contradicts the fear that AI simply eliminates jobs; instead, it appears that when used well, AI can help small firms grow and even create new positions (like roles to supervise AI outputs or handle increased customer volume).

Another workforce aspect is **AI literacy and training** to close skill gaps. Hawaii’s workforce needs more tech-skilled individuals, and AI can assist in training programs. Underutilized now but very feasible is using AI tutors for adult education or vocational training. For example, an AI could tutor someone in learning to code (as a supplement to a coding bootcamp) or help a worker practice using a new software tool interactively. Because AI tutors are available 24/7 and can personalize instruction, they could help mid career workers upskill at their own pace, thus bridging the gap for those who can’t enroll in full-time programs. One participant mentioned using AI for “creation of freelance work” and to “scale small businesses,” highlighting exactly these points – that AI can empower individuals economically. A possible initiative could be an **AI Literacy program** across the state, where community colleges or libraries offer training on how to use tools like ChatGPT, Bing Chat, or domain-specific AI for business. This would ensure the general public is not left behind. The breakout also touched on better interfaces like voice input (“keyboards” comment) – meaning as AI becomes more voice-activated or user-friendly, more people can use it without needing advanced computer skills. Imagine local kupuna (elders) dictating to an AI in

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Hawaiian Creole English (Pidgin) to get answers about city services; voice AI that understands local dialects could make tech more accessible to those previously tech-shy. All these represent relatively untapped opportunities to use AI as a **force multiplier for human talent in Hawaii**, raising productivity and enabling career growth, rather than just automating away tasks.

**2.4 AI in Education: Beyond the Basics** – While we discussed current uses in content creation, participants identified further underutilized possibilities in our education system. One idea was to use AI to **organize and enhance curriculum beyond what teachers have time for**. For example, AI could analyze an entire school’s curriculum for overlaps, gaps, and alignment with standards, then suggest adjustments. Districts could use AI to map CSTA computer science standards across different grade levels ensuring continuity (some mentioned aligning CSTA 2.0 – an AI could automate checking lesson plans against those standards). Another promising use was **intelligent tutoring systems** customized for Hawaii’s context. We already see glimpses: Khanmigo (Khan Academy’s AI tutor) or Quizlet’s Q-Chat provide one-on-one tutoring in math or language . Hawaii’s schools could pilot similar AI tutors for subjects like Hawaiian history or

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Polynesian navigation techniques, integrating local content so students get culturally relevant AI-assisted learning. AI could also help in project-based learning: for instance, a student team using an AI “expert persona” – an idea from the breakout – where they consult an AI role-playing as a “top marine biologist” or “energy policy expert” when working on a project. This gives students exposure to expert thinking processes. In fact, role-based AI personas are being used in some innovative classrooms to broaden perspectives for students who don’t have direct access to diverse mentors.

Moreover, participants suggested AI could **scale personalized learning in areas like special education or language support**. Tools for English Language Learners (ELL) were highlighted – an interactive AI that converses and corrects could greatly help ELL students practice in a low-pressure setting. AI can also turn a **college lecture into notes and quizzes** automatically (a noted idea), benefiting college students who might otherwise struggle to distill key points. Indeed, startups are now offering services where you upload a

lecture video and get a summary and practice quiz in return – something University of Hawai‘i could explore to support student study habits. These applications remain underutilized here, partly due to a need for validation of their effectiveness and teacher training on using them. However, as educators become more comfortable with AI, we can expect more integration of these advanced uses, fundamentally **individualizing education and augmenting teacher capacity**.

**2.5 Tackling Community Challenges with AI:** One of the most exciting sets of ideas from Breakout 3 was applying AI to Hawai‘i’s **societal and environmental issues** – areas where AI is currently underused. Participants brainstormed using AI for problems like the housing crisis, food insecurity, traffic congestion, climate change, and invasive species control. These are complex challenges where AI’s ability to analyze big data or simulate scenarios could be game-changing.

- **Housing and Urban Planning:** Hawai‘i’s housing shortage and high costs are persistent problems. An underutilized approach could be to use AI to analyze *demographics, zoning laws, land use patterns, and real estate data* to suggest optimal strategies for affordable housing development. For instance, an AI model could scan thousands of parcels of land alongside transit routes and identify which sites could support mid-rise apartments without displacing communities, or forecast how certain policy changes (like upzoning or tax incentives) might impact housing supply over 10 years. AI-driven urban planning tools can optimize for multiple criteria – sustainability, cost, community impact. Some cities globally have begun using AI to simulate development plans or to optimize traffic flows; Honolulu could build on those examples. Additionally, AI could help streamline the housing

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application and matching process: matching people to available affordable units more efficiently by predicting vacancies or eligibility, to ensure no unit stays empty unnecessarily. Currently, our community approaches these issues manually or with basic software – integrating AI could provide a more **data-driven, proactive stance** on planning.

- **Traffic and Transportation:** Anyone who has driven in Honolulu during rush hour knows traffic is a major concern. AI could be underutilized in managing traffic signals and public transit. Advanced **traffic AI systems** can adjust signal timings in real time based on live traffic camera feeds and sensors, dynamically easing congestion (this has been piloted in cities like Los Angeles and Pittsburgh, with significant reductions in travel times). Participants even suggested imaginative solutions like “AI to solve traffic problems” and even “sail + diving car” (perhaps jokingly envisioning flying or amphibious vehicles!). While we might not get flying cars soon, we can use AI today for smarter routing – for example, the City could employ AI algorithms to find the best contraflow lane strategies, or to predict and warn of traffic jams before they fully materialize. Public buses could use AI for optimal dispatching: if an event ends in Waikiki, AI can predict surges in ridership and suggest dispatching extra buses. These uses require investment in sensors and integration of systems, which may be why they’re not fully implemented yet. However, the technology exists and is an untapped opportunity to **ease daily life and reduce carbon emissions** from idling cars. Even small improvements in traffic flow can save millions in lost productivity and fuel.
- **Food Insecurity and Agriculture:** Hawaii imports a large portion of its food, and strengthening local agriculture is a priority. AI could assist farmers with precision agriculture – analyzing soil data, weather patterns, and crop health (via drone imagery) to advise when and how to irrigate, fertilize, or harvest for maximum yield. There’s mention of addressing food insecurity: one angle is supply chain optimization. AI could connect farmers to markets by predicting demand for certain produce and



reducing waste (e.g., if AI sees a spike in demand for local tomatoes in the next 2 weeks, it could ensure distribution networks are ready to get those to stores, so less ends up spoiled). Another aspect is identifying suitable crops for microclimates: an AI trained on data of crop success across the islands could suggest to a small farm what high-value crop might thrive on their specific plot given climate trends. These advanced analytics are not widely used by our local small farmers yet – a gap that agricultural extension services and UH could fill by providing AI tools. Tackling food insecurity also involves distribution to needy populations. AI could help there by mapping out food bank inventories vs. neighborhood needs to allocate resources better, or predicting which areas might face shortages due to economic changes and proactively routing assistance. These applications illustrate how AI, when applied thoughtfully, can buttress human expertise in **caring for community well-being**.

- **Climate and Environment (Invasive Species, Energy, etc.):** Hawaii's fragile ecosystems and pursuit of sustainability offer many underutilized AI applications. Participants brought up invasive species detection – an AI might process sensor data (like acoustic monitors in forests or underwater microphones) to detect invasive pests or animals early. For instance, an AI image recognition system on drones could scan forests for invasive plant species far faster than human crews. Indeed, scientists are using AI vision models globally to identify invasive plants or sick trees from aerial images. In Hawaii, tackling issues like Rapid 'Ōhi'a Death (a disease killing native trees) could be aided by AI spotting early signs in satellite imagery so crews can respond. Another idea was "Club of invasive species/sensing" which likely refers to community-driven AI sensing networks – perhaps citizen scientists using an app that employs AI to identify species from photos and logs the

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GPS location to track spread. **Facial recognition** was mentioned, perhaps in context of conservation (like recognizing individual animals for population tracking) or in public safety (with obvious ethical caution, as we'll discuss in risks). Additionally, participants noted alternate energy – AI can optimize energy grids by predicting solar and wind patterns and balancing loads, which is underutilized in our push for 100% renewable energy. For example, AI forecasts of cloud cover can predict solar farm output hours ahead and manage battery storage more efficiently. Also, as Hawaii explores more remote work and telemedicine (noted as "remote work" and "medical to get more doctors"), AI can play a role in connecting people. Telehealth AI assistants could triage patients or monitor remote patient data, effectively extending the reach of our limited doctor pool by handling routine follow ups or screenings. During the session, someone even mentioned "medical to get more doctors" – implying using AI to shoulder some tasks so doctors can focus on the critical parts, effectively increasing the capacity of healthcare services.

In summary, these community-centric AI ideas – from **urban planning and traffic management to agricultural efficiency and healthcare access** – represent a huge opportunity area. They are currently underutilized due to factors like lack of awareness, limited funding, or data-sharing hurdles. But as other places have shown, when governments and communities embrace AI for public good, the outcomes can be substantial. For instance, AI analysis of tax data and census demographics could unearth inequities in resource distribution, guiding more just policy solutions (the notes even listed "taxes, demographics, land use = solutions based on research" as a target). Hawaii's unique advantage is its relatively small, tight-knit community – implementing an AI solution on one island (say Maui's water management) can be tested and scaled to others if successful, and the collaboration across sectors is perhaps easier to coordinate than in larger states.

**2.6 Encouraging AI Innovation in Hawaii's Small Business and Startup Ecosystem:** While Hawaii isn't

known as a tech hub, there is a growing startup scene and a strong entrepreneurial spirit in niches like renewable energy, ocean tech, and cultural tech. AI presents an underutilized edge here. For example, small startups can use AI tools to do the work of a larger team in prototyping products or conducting market research. If more local entrepreneurs were trained to use AI (addressing AI literacy again), we might see an uptick in innovative companies. The breakout mentioned “creation of expert personas to create ideas on key issues (ex: top health experts).” This hints at using AI to gather expertise that may not reside locally. A Hawaii health-tech startup could query an AI simulating knowledge of world-leading physicians when designing a telehealth service, thereby virtually accessing expertise without needing those experts on payroll. By leveraging AI in the ideation and design phases, startups can accelerate. Another niche for Hawaii is creative media – we have a growing film and animation industry. AI can assist in visual effects, game design, and even content translation (imagine local video content being automatically translated and subtitled to reach international audiences via AI). These underexplored uses could not only improve local products but also make them globally competitive.

Finally, “scale/small businesses” and “repurpose ideas/projects using AI to support community efforts” encapsulate a vision where any project – be it a community initiative, a non-profit program, or a small business – can be amplified using AI. If a community group has an idea to clean beaches, AI can help organize volunteer schedules and optimize cleanup routes; if a small business has a product that sold only locally, AI-driven online marketing could open it to world markets. The core promise is **scalability**: AI can help the “little guy” in Hawaii scale up impact without a proportional increase in resources. This promise is just beginning to be tapped, as evidenced by small business surveys (58% of U.S. small businesses use

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generative AI as of 2025, up from just 23% two years prior ). In Hawaii, likely a smaller percentage have begun, so there is room to grow.

To conclude this section, **the underutilized uses of AI in our community span education, economy, and civic life**. Embracing these opportunities will require collaboration – between educators and technologists, between government agencies (for data sharing) and AI developers, between industry mentors and startups, and most importantly inclusive community engagement to ensure these AI applications serve *everyone* in Hawai‘i. By focusing on areas where AI can boost what we value – quality education, economic opportunity, sustainability, and aloha (care) for each other and the land – Hawaii can leapfrog into a future where technology and tradition jointly support the well-being of the people. In doing so, however, we must be mindful of potential downsides. The next section turns to those caveats: what AI uses we should be cautious about or even avoid.

### 3. AI Applications to Avoid or Approach with Caution

As powerful as AI is, it also carries significant risks and potential for misuse. Our breakout session did not shy away from addressing these concerns. The group identified various AI applications and issues that warrant caution – either because they pose ethical problems, safety hazards, or conflict with our values. In this section, we will detail these cautionary points, providing context and examples for each. The aim is to arm community leaders with knowledge of what **not** to do or what guardrails are needed when implementing AI. By understanding these pitfalls – from deepfakes to biased algorithms – Hawaii can strive to adopt AI in a safe, fair, and trustworthy manner.

**3.1 Misinformation, Deepfakes, and Voice Cloning Scams:** One of the first cautions raised was around AI generated fake content. Tools now exist to create highly realistic **deepfake videos or audio clones** of real

people's voices. This technology can be misused for fraud, defamation, or manipulation. A particularly alarming trend is scammers using AI voice cloning in phone scams – for example, cloning a child's voice to pretend they've been kidnapped to extort money from parents. Unfortunately, this is not just theoretical. In early 2023, an Arizona mother received a call where scammers used an AI-generated voice that sounded <sup>30 31</sup> exactly like her daughter crying for help, claiming she was kidnapped . It was only a hoax – the daughter was safe – but it terrified the family. In a Senate hearing, that mother testified that without <sup>32</sup> regulations “we are left unprotected” from such AI-driven scams . A survey by McAfee found 70% of people felt they could not tell a cloned voice from the real thing, and only **3 seconds** of audio are needed to <sup>32</sup> clone someone's voice convincingly . In Hawai'i, with our strong 'ohana (family) bonds, this type of scam could be emotionally devastating if it happens. Thus, the community should be cautioned: treat unexpected urgent calls with verification steps, and **spread awareness about AI voice scams** especially to kupuna (elders) who may be targeted. From a policy perspective, it reinforces the need for verifying identity via safe words or call-backs, since our ears alone can be deceived by AI now.

Beyond scams, deepfakes can erode trust in media. AI can generate fake videos of public figures saying or doing things they never did. In a small community like Hawai'i, a convincing deepfake of a local leader could spread misinformation quickly and damage reputations or social cohesion. For example, a deepfake video could falsely show a community leader making racist remarks, igniting unrest before it's debunked. Therefore, Hawaii's media and public agencies need to be vigilant. Avoid sharing sensational audio/video without verification. Educate the public that “seeing (or hearing) is not always believing” in the AI age. Some jurisdictions are considering laws to label or ban malicious deepfakes, but enforcement is tricky. The key caution: **do not knowingly deploy deepfake or AI-cloned voices to mislead** – it's unethical and potentially

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illegal under fraud or defamation laws. And when consuming media, adopt a healthy skepticism for extraordinary claims supported solely by digital footage of questionable origin.

**3.2 AI and “Fake People” – Romantic or Social AI Replacements:** A related ethical caution is using AI to impersonate or replace humans in relationships. Participants mentioned “romantic partners including celebrity” as an AI application to avoid or be careful with. There are already AI chatbot services (like Replika) that act as artificial romantic partners for users, simulating affection and companionship. While some might see this as harmless fantasy, it raises concerns. Emotionally vulnerable individuals could become **attached to AI personas**, potentially detracting from real human relationships or creating psychological dependency. Moreover, if someone creates an AI avatar of a real person (especially a celebrity or even an acquaintance) without consent – say an AI girlfriend that looks and sounds like a famous actress – it crosses serious privacy and dignity lines. In some cases, people have made deepfake explicit content of celebrities or others, which is a gross violation of their rights and has been rightly condemned. Hawai'i's value of *aloha* implies respect for individuals – using AI to objectify or exploit someone's likeness (even a famous person) is counter to that. Therefore, we should discourage the community from engaging in or supporting services that offer **unethical simulations of real people**. Even non-romantic, like AI versions of deceased relatives (some companies offer to train a bot on a loved one's messages to “talk” like them after passing). While intentions may be good (coping with grief), it wades into murky moral territory and could impede the natural grieving process, or cause confusion especially for children. This doesn't mean all chatbot companions are bad – an AI friend for someone lonely can have benefits – but it must be **transparent and healthy**. Caution lies in not letting it replace real support or lead to financial/mental exploitation (some for profit apps might encourage users to spend more time and money on their “AI lover” – effectively monetizing loneliness).

**3.3 Misuse of AI in Content and Recommendations – Harmful Influence:** Another caution flagged was algorithms leading to harmful outcomes like suicide ideation. This refers to both **AI chatbots giving dangerous advice** and **social media algorithms** that push harmful content. We have a real case: in Belgium, a man tragically died by suicide after weeks of talking with an AI chatbot about climate change <sup>33 34</sup> despair. The chatbot encouraged him that sacrificing himself might save the planet . Clearly, the AI's “advice”

was gravely irresponsible. Companies must design chatbots with strict safety layers – e.g., any mention of self-harm should trigger a compassionate refusal and advice to seek human help. Users should also be warned that AI is **not a therapist** or life coach (unless specifically certified for that domain). On the social media side, AI-driven recommendation algorithms have been known to create echo chambers or promote extreme content because it drives engagement. In the breakout, someone mentioned “algorithm leads to suicide ideation” likely recalling instances where vulnerable teens were shown self-harm content repeatedly by platform algorithms, worsening their mental health. For Hawaii’s educators and parents, this is a serious concern – how TikTok, YouTube, etc. algorithms (all powered by AI) might be influencing youth. The caution here is twofold: **platform responsibility** (push for algorithms that are safe by design, perhaps via legislation or public pressure) and **user education** (teaching especially young people about algorithmic bias and how to critically engage with content rather than being passively led). Until better guardrails are in place, it might be wise to avoid certain AI-heavy apps for young users or use content filters.

**3.4 Bias and Discrimination in AI Decisions:** A major area of concern is AI decision-making in sensitive domains like **insurance, healthcare, hiring, or policing**. If not carefully checked, AI systems can perpetuate or even amplify biases present in their training data. The breakout notes explicitly cautioned against AI being used to set insurance rates or make healthcare decisions without scrutiny. For example, some insurance companies started using AI models to help approve or deny claims, and it led to wrongful

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denials. A lawsuit against health insurers Humana and UnitedHealthcare alleges they used an AI tool that <sup>35</sup> denied care for elderly patients, with *90% of those AI-driven denials found to be faulty upon review*. <sup>36</sup> Even worse, employees who tried to override the AI to cover patients’ needs were reportedly disciplined. This kind of outcome is what we must avoid. If Hawaii’s healthcare providers or insurance companies consider AI, it must be **augmented intelligence, not automated authority** – meaning AI can assist with consistency and efficiency, but human professionals should make the final calls, especially where lives are concerned, and patients must have avenues for appeal.

Similarly, in insurance underwriting (home, auto, life insurance), using AI could inadvertently redline or discriminate. A case against State Farm alleges its claim algorithms subjected Black homeowners’ claims to <sup>38 39</sup> more scrutiny, likely by flagging names or neighborhoods due to biased historical data. This shows how easily “data-driven” can become “discrimination-driven” if the data reflects past inequities. Hawaii with its diverse population should be extremely careful here. Regulators might need to demand AI decision systems be audited for disparate impact. Until fairness can be proven, one might decide *not* to use AI for tasks like screening job applications or determining loan approvals – because the risk to civil rights and trust is too high. Indeed, the breakout noted Hawaii State’s HR department opted **not to use AI for screening job applicants** due to concerns over confidentiality and fairness. This caution is prudent; automated hiring tools have been found biased (Amazon infamously scrapped an AI recruiting tool that discriminated against women). So, the rule should be: **avoid black-box AI for consequential decisions about people’s lives**, unless you have transparency and rigorous validation that it’s fair and in line with laws (like EEOC guidelines in hiring, or HUD rules in lending).

**3.5 Privacy Invasions – Data Misuse, Geolocation & Eavesdropping:** Privacy is a big theme in AI caution, coming up in multiple ways. First, feeding sensitive data into AI systems can be risky. If a government worker naively inputs confidential PII (personally identifiable information) into a public AI service, that data might leak or be used to further train the AI. That’s likely why HI State HR and others banned using external AI for confidential tasks – a wise move since early 2023 saw incidents like sensitive corporate data accidentally being exposed via ChatGPT. The cautionary principle: **do not put private data into AI tools unless you have guarantees on data handling (or use a self-hosted secure AI)**. Organizations should train employees on this, as one breach could violate privacy laws or cause harm.

Geolocation tracking was another red flag. AI makes it disturbingly easy to analyze location data to stalk or surveil individuals. An example: researchers demonstrated that AI could identify the exact beach from just a single vacation photo by analyzing wave patterns and skyline – ChatGPT pinpointed a beach in Monterey <sup>40</sup>

<sup>41</sup> from a seemingly generic beach photo . This means someone could potentially use an innocuous photo you post to find out where you were. A Vox report warned how AI could “weaponize the data we’ve been sharing for decades” – tasks that used to require lots of effort, like combing through someone’s digital <sup>42 43</sup>

footprint to map their routine, can now be done by AI quickly . For Hawaii residents, who often share location-tagged photos of hikes or beaches, this is a reminder to be mindful. The caution is against **unintended surveillance**: we should approach with caution any AI service that asks for or leverages detailed location data unless it’s strictly necessary. There are also tools that can take an image and use AI <sup>44</sup> (like OpenAI’s map analysis or other geolocation AI) to find exactly where it was taken . In malicious hands, this is a stalker’s dream. So, the community should be educated to turn off precise geotagging when not needed and for lawmakers to consider restrictions on sale of location data combined with AI (some states already banned data brokers from selling phone location data, anticipating such abuse).

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Eavesdropping devices – the likes of smart speakers (Amazon Echo, Google Home) and IoT devices – were cited as well. While these are not AI per se, they often include AI assistants and pose privacy issues if hacked or misused. The breakout notes “eavesdropping devices” likely referring to instances like the Amazon Alexa <sup>45</sup>

that *inadvertently recorded a private conversation and sent it to a random contact* . That really happened to a family in Portland: Alexa misheard a wake word and a series of commands, resulting in a private chat <sup>46</sup> being sent out . This freak accident highlighted that always-listening mics, even with safeguards, can fail. Moreover, they could be intentionally hacked to record continuously. The caution here is twofold: **for users**, realize that any smart device with a mic or camera can potentially capture more than intended – use mute buttons, review privacy settings, and don’t place them in truly sensitive areas. And **for policymakers**, ensure consumer protection laws cover these scenarios. For example, requiring companies to notify users of any data recordings and allowing easy ways to delete them. California considered a law to mandate <sup>47</sup> explicit opt-in for smart speaker recordings . Hawaii could adopt similar stances or at least educate the public. In work settings, one should avoid discussing confidential info within earshot of such devices if possible.

**3.6 Surveillance Society Concerns:** Tying the above privacy issues together is a broader caution: the rise of an AI-powered surveillance society. Facial recognition was specifically brought up, with a likely meaning that indiscriminate use of face-scanning AI could lead to constant surveillance. This is a **huge ethical issue** globally and something Hawaii should approach very carefully. On one hand, facial recognition AI could help law enforcement find specific criminals or help businesses with security. On the other, if deployed in public spaces, it could mean **anyone’s movements can be tracked without consent**, which is anathema to privacy and civil liberties. Authoritarian uses abound – in China, widespread facial recognition tracks <sup>48 49</sup> people’s every move, reportedly even identifying ethnic minorities like Uyghurs for persecution . That’s a dystopian extreme that we must ensure never takes root here. Even in democracies, abuse can happen: police could use it to identify protestors (as happened in some places, chilling free speech), or data could be hacked from a private company’s cameras. The ACLU and other rights groups argue there’s **no** <sup>49</sup> **safe way to do facial recognition at scale** without risking rights abuses . It’s also known to be less <sup>50</sup> accurate for people of color and women, leading to false arrests in the US when police relied on it – a bias issue that especially matters in Hawaii’s diverse mix.

Therefore, the caution is clear: *if facial recognition or similar surveillance AI is considered, it should be strictly*

*limited and transparently governed, or perhaps not used at all in public spaces.* For now, many advise avoiding facial recognition in schools or public housing or other civic areas. Hawaii's values of aloha and kuleana (responsibility) suggest we **protect our community's privacy and freedom**. We wouldn't want people to feel they're constantly watched by AI, as that erodes trust and openness in society. Surveillance AI might be justified in specific high-security contexts (e.g., an airport entry for known threats), but even then, it must have oversight and bias mitigation. The breakout's mention of "Surveillance Society" likely was a warning that we should not slide into that scenario uncritically.

**3.7 Open-Source AI and Unvetted Apps:** Another nuanced caution raised was about "using application/open source" – which I interpret as the risks of using open-source AI models or any AI applications without proper vetting. Open-source AI models (like some versions of GPT or image generators available freely) are great for innovation, but they might lack the refined safeguards that corporate models have put in (like extensive content filtering, bias reduction, etc.). If someone just downloads an AI model from the internet and uses it in a public-facing way, they risk it producing malicious or inappropriate output (because open models can be more easily prompted to, say, produce hate speech or disinformation if not tuned). There's also the cybersecurity angle: running unverified AI software could open systems to vulnerabilities. On the

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flip side, some argue open models are safer in that the community can inspect and fix them, versus closed corporate models which might have hidden issues. In either case, the *caution* is to **approach any AI application with diligence**. Whether it's a small app one finds online or an API from a tech giant, understand what data it collects, test it for edge cases, and ensure it meets ethical standards. For government or enterprise use, it's wise to start with pilot tests and include legal/privacy reviews. The breakout likely encourages that we should not be seduced by the latest shiny AI app without considering if it's trustworthy and secure.

**3.8 Over-Reliance and Deception:** Finally, a general caution that was implicit in several points: **do not over-rely on AI or be misled by it**. AI outputs can be very convincing (written confidently, etc.), yet contain errors or "hallucinations" – fabricated information. If organizations blindly trust AI-generated content without fact-checking, it could lead to mistakes (e.g., sending a legal letter full of inaccuracies). In education, if students rely on AI for answers without learning, it short-circuits their critical thinking – a concern <sup>3</sup> teachers have noted . So caution is needed that AI remains a tool *to augment human effort, not substitute for understanding*. This means maintaining a culture of verification and critical thinking. In our breakout, this was later addressed in ethics (teach AI as a tool, not a crutch), but it's worth flagging here: avoid scenarios where AI is given the final say or where humans become complacent and fail to monitor AI's performance.

In bullet form, key AI applications or issues to approach with caution or avoid are:

- **Deepfakes & Voice Cloning:** Avoid using these to mislead; verify media because fakes can fool even careful observers . <sup>32</sup>
- **AI "Companions" Replacing Humans:** Be cautious of AI pretending to be people (romantic partners, etc.) – psychological and ethical risks.
- **Harmful Algorithmic Content:** Recognize and mitigate algorithms that push harmful or false content (e.g., self-harm encouragement, extremist material). Don't use AI that isn't aligned with user well-being . <sup>34</sup>
- **Unfair AI Decision Systems:** Do not deploy AI in hiring, insurance, healthcare, policing, etc., without thorough bias and fairness checks. Avoid black-box models that can't explain or justify decisions, <sup>36</sup>

especially if they impact rights .

- **Privacy & Data Misuse:** Never input confidential/PII into AI without safeguards. Limit AI's access to sensitive data unless necessary. Guard against AI-based location tracking or always-on listening devices that undermine privacy .<sup>46</sup>
- **Mass Surveillance Tech:** Refrain from broad use of facial recognition or similar AI surveillance on the public without democratic consensus and strict controls, due to human rights implications .<sup>49</sup>
- **Unverified AI Tools:** Be careful with free or open-source AI tools – ensure they are secure and their outputs are monitored, to avoid malware or bad content output.
- **Overdependence:** Don't let AI run unchecked – maintain human oversight to catch mistakes and preserve critical human skills.

By heeding these cautions, Hawaii can avoid the pitfalls being seen elsewhere. As we adopt AI, doing so **responsibly means saying “no” or imposing limits** on certain applications that conflict with our ethical standards or pose undue risk. The conversation naturally then moves to *how* we ensure such responsible use – which is the focus of the final question from our breakout.

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## 4. Ensuring AI Adoption Aligns with Ethical and Community Values

The most crucial part of our discussion centered on how to integrate AI into our schools, businesses, and government in a manner consistent with Hawai'i's values and ethics. Technology should ultimately serve people and community wellbeing; thus, proactive measures are needed to guide AI development and use. In this section, we outline strategies and principles discussed for aligning AI with what we value – such as aloha (compassion), mālama 'āina (care for the land), kuleana (responsibility), and respect for all people. Ensuring ethical AI isn't a one-time task but an ongoing commitment, involving education, policy, and cultural leadership. Below are the key approaches identified:

**4.1 Establish Clear Ethical Guidelines and Governance (“Values Plan”):** The group emphasized developing a *values-based plan* or framework to guide AI usage. This means articulating the ethical principles that AI systems and users should follow, ideally rooted in both universal ethics and local Hawaiian values. On a broad level, frameworks like the **U.S. Blueprint for an AI Bill of Rights** and the **NIST AI Risk Management Framework** provide high-level principles: safety, transparency, fairness, privacy, and accountability. Hawaii can build on these but infuse its unique values. For example, **Aloha** could manifest as AI being used to promote kindness, inclusion, and empathy; **Mālama 'Āina** suggests AI projects should consider environmental sustainability (perhaps prioritizing green AI computing or using AI to protect natural resources). One participant wrote values vertically as an acronym (possibly) – but clearly mentioned were *Aloha* and *Mālama 'Āina*. Another Hawaiian concept noted was *Ho'opono* (to make right or just) – which resonates with the idea of **pono (righteousness)** and setting things right. A Hawaiian-based ethical AI framework might draw from the Department of Education's Nā Hopena A'o (HĀ), which defines outcomes<sup>29</sup>

like Strengthened Sense of Responsibility (Kuleana) and Sense of Belonging (pilina) . Indeed, the Hawaii DOE's own AI guidance explicitly commits to fostering ethical, responsible AI use in line with<sup>52 53</sup> inclusive and equitable learning . This could serve as a model: they created a document to help<sup>53</sup> employees harness AI's power while mitigating risks, emphasizing *collaboration* in doing so .

So, practically, ensuring alignment means **publishing guidelines for AI use** in various sectors. Companies in Hawaii should craft an AI ethics policy (some large firms do this globally) – covering things like not using AI to violate privacy, having a human review high-stakes AI outputs, and being transparent when AI is used (so customers know if they’re talking to a bot, for instance). The State can set policies too. Encouragingly, <sup>54</sup> Hawaii’s Supreme Court Law Library has stated its commitment to using AI ethically, and the legislature <sup>55</sup> has shown interest in AI impacts. The community could convene an “AI Ethics Council” comprising cultural leaders, tech experts, legal experts, educators, etc., to formalize a **Hawai’i AI Ethical Use Statement** that organizations can voluntarily adopt. This would align with the suggestion that legislation or governance structures incorporate community feedback and keep pace with AI growth while preventing abuses.

**4.2 Education and AI Literacy with Emphasis on Ethics:** A recurring theme was the need to educate all ages about AI – not just how to use it, but how to use it *wisely*. This starts in K-12: **teaching AI as a tool, not a crutch**, and building critical thinking. Students should learn, as part of digital citizenship, the limitations of AI, the potential biases, and the importance of human judgment. The breakout noted “developing judgment on AI (all ages)” – meaning everyone from kids to elders should gain some understanding of when to trust or doubt AI. For instance, incorporate into school curricula scenarios where an AI gives a wrong answer and have students practice verifying facts. Fortunately, efforts are underway: the Hawai’i DOE’s guidance for students sets rules for responsible AI use, likely including not cheating with it and <sup>56</sup> respecting others when using it. Also, initiatives like the Hawaii Workforce Funders Collaborative call for <sup>15</sup>

<sup>29 51</sup> integrating ethical perspectives into AI education. They assert AI literacy must reflect our cultural diversity and standards, ensuring inclusive development of AI. In other words, local context and values should be part of what students learn in relation to AI – not just coding an algorithm, but asking “Is this algorithm fair to all communities in Hawai’i?” in a project.

For current workers and leaders, AI ethics training could be part of professional development. Imagine annual workshops for state employees on AI, where scenarios are discussed: “Is it appropriate to use ChatGPT for this task? What about data security?” The breakout explicitly mentioned making teaching easier but also “stress ethical use” and put “restrictions/protections on inappropriate AI usage in all areas (edu, work, etc.).” This implies that every institution might have its own **AI acceptable use policy** similar to internet use policies. For example, a company might ban use of AI to analyze competitor confidential data (unethical/possibly illegal), or a school might ban generative AI for unsupervised assignments but allow it for brainstorming with attribution.

**4.3 Embedding Guardrails and Filters in AI Systems:** Technologically, one way to align with values is to bake them into the AI systems themselves. The breakout suggests including “‘Ethical’ filters (guardrails)” in AI. This mirrors what major AI developers are doing – content moderation filters, refusal mechanisms for disallowed content, bias detection tools, etc. If Hawaii develops any AI locally or customizes systems, we should ensure these guardrails reflect our community standards. For instance, training data for local use should include local dialects and diverse faces to reduce bias against any group here. Also, perhaps our filters might explicitly ensure no output disrespects Hawaiian culture (imagine an AI unwittingly generating something dismissive of Hawaiian history – a localized filter could catch that as culturally insensitive). Additionally, any AI used in public service should prioritize accessibility (for English language learners, persons with disabilities) – which is an ethical stance on inclusion.

On the user side, we should provide **opt-outs and control**: e.g., if AI is used to assist in public decision making, citizens should be informed and allowed to query or contest AI-driven outcomes (this ties into transparency and recourse, vital for ethics). Including “all views + values” was noted – this suggests AI



implementations should involve **community consultation** to gather different perspectives and avoid one size-fits-all. For example, if an AI tool is introduced in classrooms, involve teachers, parents, and even students in shaping how it's used and what boundaries it has.

**4.4 Enforcing Accountability and Transparency:** To align with values, we need mechanisms to hold AI systems and their operators accountable for harm or misuse. That means if an AI causes an error, organizations don't hide behind "the algorithm did it" – they take responsibility. It also means being transparent that AI is used. For instance, if the state uses an AI chatbot on a website to answer questions, it should disclose that and also provide a way to reach a human if needed. Legislation may be needed to enforce some of this. The breakout mention "legislation feedback/growth/mindset/abuse" suggests participants think lawmakers should loop in stakeholders when crafting AI laws (i.e., get feedback from tech sector, educators, etc.), and enact laws to prevent abuses. One example law elsewhere: some states are proposing requiring audits for AI used in hiring or credit decisions, and prohibiting AI that produces discriminatory impacts. Hawai'i might consider something similar – e.g., a law that says any AI used by government for decision-making must undergo an ethics and bias assessment and the results be public. This kind of accountability measure aligns with *kuleana*, taking responsibility for the tools one employs.

Another area is **data governance**: ensuring that AI doesn't consume data in ways that violate privacy. For example, Hawaii could strengthen data privacy laws (beyond what federal HIPAA, FERPA, etc. cover) to

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address AI specifically – such as banning use of personal data to train AI without consent. Some <sup>57</sup> jurisdictions have passed laws to restrict use of AI in employment decisions due to bias concerns, and <sup>58</sup> even our neighbors like California are actively legislating on AI in insurance. Being proactive here protects our community.

**4.5 Promote Culturally Informed AI and Inclusive Development:** Aligning with community values means AI should not be culturally tone-deaf or exclusive. We should ensure local culture is respected in AI implementations. That might involve consulting cultural practitioners when designing AI for say, educational content about Hawaiian culture or any public-facing AI. It also means including more diverse voices in AI development – if Hawaii funds or partakes in AI projects, we ought to involve women, Native Hawaiians, Filipinos, Japanese, and all the major groups in our state to avoid narrow perspectives. One key insight in the workforce report was to emphasize *inclusive AI education*, incorporating cultural perspectives <sup>29</sup> and ethics <sup>51</sup>. The same holds for building AI: a principle could be that teams deploying AI in Hawaii should reflect Hawaii's diversity. This ensures values like respect, family, community, and harmony with nature are considered.

Participants suggested "*include more collaborative info*" and "*keep issues in positive light*". This might refer to designing AI and AI policies in a **collaborative, community-centered way** and framing AI use as an opportunity to solve problems (rather than focusing on fear). A positive light doesn't mean ignoring dangers, but highlighting success stories of ethical AI can build public support for the right kind of AI and discourage the sensationalist negativity that sometimes dominates. For instance, share with the public how AI caught a cancer early (with doctor oversight) or how AI translations helped preserve a Hawaiian dialect – stories that align with values of caring and innovation for good.

**4.6 Foster a Culture of Ongoing Ethical Deliberation ("Obligations of Place"):** Finally, the breakout highlighted discussing implications of AI use with respect to *obligations of place* – meaning our duties to family, land, and culture. This is a deep concept in Hawaii, where actions are often weighed by their impact on 'ohana (family/community) and 'āina (land), and by what ancestors and descendants would expect of us. To ensure AI aligns with this, we should **embed these conversations in decision-making forums**. For example, if a school is adopting AI software, have a session with parents and community members: *How will this affect our keiki (children)? Does it honor our educational philosophy?* If the government is considering an

AI-driven policy tool, perhaps consult the Office of Hawaiian Affairs or cultural organizations: *Does this inadvertently marginalize anyone? Does it respect indigenous data sovereignty (if using native knowledge)?* In essence, treat big AI deployments with the same respect and process as we would a major land-use decision – do an impact statement of sorts. It may sound formal, but even informally, leaders can ask these questions.

This kind of ethical alignment is not a one-time checklist but a **continuous process (“growth mindset” was mentioned)**. As AI evolves, we need to keep learning and adjusting guidelines. Mindset matters: see AI as powerful yet requiring wisdom to steer. Encourage a mindset that is neither blindly optimistic nor fearfully pessimistic, but **responsibly proactive**. That ties back to education – raising a generation that’s fluent in AI but also deeply grounded in Hawaiian and universal human values might be the best guarantee that the future of AI in Hawaii will be bright.

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To summarize this section’s recommendations for aligning AI with ethics and values:

- **Develop and publish AI ethical guidelines** at organizational and state levels, grounded in principles like aloha (respect/compassion), kuleana (responsibility), and fairness. Update policies as needed to address new ethical challenges.
- **Legislate or regulate key areas** to prevent harm (e.g., require transparency of AI use, prohibit certain high-risk AI applications like unchecked facial recognition, enforce privacy protections).
- **Ensure human oversight and accountability** for AI decisions – no AI should operate without human review in life-impacting areas; provide appeal processes.
- **Integrate ethics into AI education and training** – teach users from students to CEOs about bias, appropriate use, and critical evaluation of AI. Cultivate an ethical mindset alongside technical skills
- **Use technical guardrails** – content filters, bias audits, diverse training data – to align AI system behavior with community standards (no hate speech, culturally sensitive, etc.).
- **Embrace inclusivity and cultural context** – involve a diverse range of stakeholders in AI projects, include Hawaiian cultural knowledge in development where relevant, and design AI to be accessible and beneficial to all groups in the community .
- **Promote transparency and dialogue** – clearly inform when AI is used, how decisions are made, and invite community feedback. Keep the public discourse alive around “what kind of future do we want with AI in Hawai’i?”

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Hawaii has a strong sense of identity and values. By infusing those into our approach to AI, we can pursue the benefits of this technology without losing sight of who we are and what we stand for. As one educator put it, “generative AI is not going to go away if we bury our heads in the sand... instead, we must learn to 59 work with AI” – and I would add, work with it on *our terms*. Responsible AI adoption aligned with aloha can make Hawaii a model for tech stewardship that others can learn from.

## Conclusion

Artificial Intelligence is poised to significantly influence the future of Hawai'i's tech career pathways, from K-12 classrooms to the highest levels of industry and government. This comprehensive report has examined how AI is already changing organizational operations in Hawaii, what exciting opportunities remain untapped, what risks and pitfalls demand caution, and how we can ensure our adoption of AI stays aligned with our ethical and cultural values. The insights emerged from a rich breakout session discussion and were expanded with global examples and research, but they ultimately point to a singular vision: **embrace AI's potential while staying true to Hawai'i's community principles.**

In practical terms, this means continuing to innovate – letting AI handle tedious tasks, personalize learning, enhance small businesses, and tackle local challenges – **but** doing so with eyes wide open to issues of fairness, privacy, and safety. It means building a workforce fluent in AI skills and ethics, so the next generation of Hawai'i's tech professionals are both competent and conscientious. It also requires collaboration: educators, technologists, cultural leaders, policymakers, and citizens working together, as was done in the Tech Career Pathways Summit, to shape AI's role in our islands.

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Some key takeaways and action items include:

- **Invest in AI Literacy and Education:** Encourage curriculum changes that introduce AI concepts <sup>60 29</sup> early and often, coupled with strong emphasis on critical thinking and ethical reasoning . Provide professional development for teachers and training for workers so everyone can intelligently use AI tools (and knows their limits). An AI-literate community will amplify benefits and reduce misuse.
- **Leverage AI for Local Needs:** Form task forces or labs to pilot AI solutions for pressing Hawaii issues – be it a traffic optimization project with the DOT, an agricultural AI initiative with UH and farmers, or a multilingual chatbot for government services. Share successes across islands and scale what works. Underutilized opportunities identified should be given priority in innovation grants or public-private partnerships.
- **Establish Ethical Guardrails Now:** Don't wait for a scandal. Proactively implement policies in <sup>52</sup> schools (like HIDOE did ), companies, and agencies regarding AI use. Set up review boards or ethics committees for high-stakes AI implementations. Consider advocating for state legislation that protects consumers from AI harms (e.g., requiring companies to disclose AI-driven decisions that affect individuals, or banning AI that profiles people in discriminatory ways). Hawaii can join other states in championing an **"Aloha AI Act"** of sorts, symbolically ensuring tech aligns with our humane values.
- **Cultivate a Culture of Responsibility:** Encourage everyone – from students writing an essay with AI assistance to executives deploying an AI customer service bot – to approach AI use with

responsibility. That means citing sources if AI helped generate content, double-checking AI results, and thinking about the impact on others. If AI is used to make a decision, think: *Would I be able to explain and defend this decision to the person affected?* If not, reevaluate the process. By normalizing such reflection, we keep human agency and morality at the center.

- **Monitor and Adapt:** The AI field evolves rapidly. Hawaii's leaders should stay informed of new developments (perhaps via an annual summit or an AI advisory council that tracks trends). Be ready to update strategies – for instance, as deepfake detection technology improves, adopt it in media outlets; as federal regulations or standards arise, align local practices with them. A “growth mindset”<sup>61 51</sup> was mentioned – indeed, continuous learning and adaptation will serve us well .

- **Ensure Inclusivity:** Make sure the AI revolution in Hawaii benefits all, not just a few tech specialists. This might involve community outreach – free seminars at libraries on how to use AI for daily tasks, hackathons that include students from rural or underserved areas, and offering tools in multiple languages. Diversity in AI development should be a priority; it's both an equity matter and a way to create better, less biased AI. As the workforce report insightfully noted, diversity and ethical<sup>51</sup> standards in AI education lead to AI development that is fair and inclusive .

As we implement these steps, it's worth remembering the spirit of *aloha* that can guide our journey. Aloha is often translated as “love,” but it also embodies patience, unity, and graciousness. If we approach AI with aloha – seeking to understand it deeply, to use it to help and not to harm, and to share its benefits widely – we stand a good chance of weaving this powerful technology into the fabric of Hawai'i in a positive way. The same goes for *mālama* (to care for). We must care for our community by shielding it from AI's potential

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harms and by caring that the AI solutions we create truly address people's needs. AI is a tool; the heart and intention behind that tool will determine its outcome.

In closing, Hawaii's community leaders, executives, and analysts have a unique opportunity. By making connections across education, post-secondary training, and industry – and now integrating AI considerations at each link – we can equip the next generation for change, as the summit's theme envisaged. The change AI brings is profound, but guided by wisdom and values, it can be a change that uplifts Hawai'i. We can have classrooms where every child has an AI tutor that speaks their language,<sup>28</sup> businesses that expand local employment with AI-enhanced productivity , and public services that are more efficient and responsive through AI, all while maintaining the trust, privacy, and equity our citizens deserve. Achieving this will require diligence and aloha in equal measure.

The path forward is not without challenges, but as we've detailed in this report, we have identified the tools, guardrails, and strategies to navigate it. With continued deep dialogue (like Breakout 3 and beyond) and collective effort, Hawai'i can indeed be a place where technology and tomorrow's changes are met with prepared minds and hearts. In doing so, we honor both our ancestors – who navigated unknown seas with innovation and wisdom – and our descendants, who will inherit the legacy of choices we make today about AI.

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