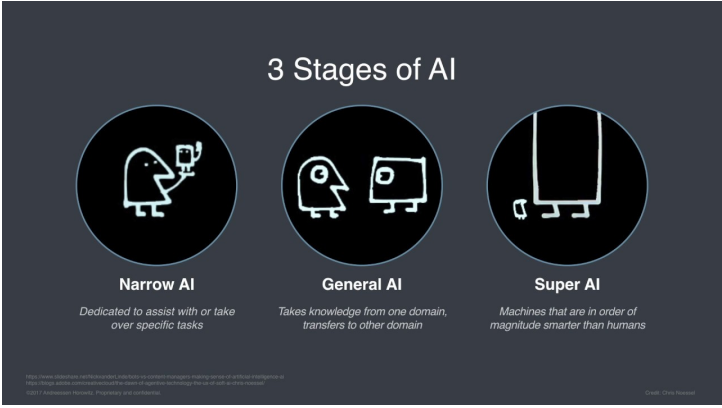
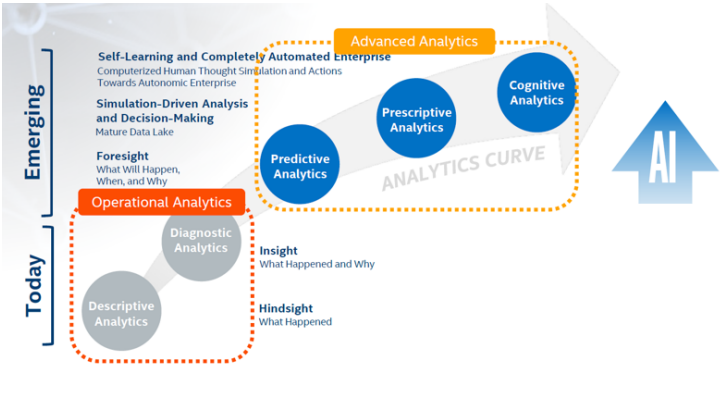


Annotated List of Resources for Exploring AI, Ethics & Education

Name of Resource	Notes/Recommendations/Thoughts on Resource	Type of Resource
<u>How AI changed organ donation in the US</u>	Description of an AI application that addresses an important problem, but with limitations.	article
<u>Stop pretending you really know what AI is and read this instead</u>	“Take a deep breath. Let’s consider for a second what we talk about when we talk about AI. Because I’m not sure many of us really know—or, at the very least, we’re not talking/ <u>arguing</u> /worrying about the same things.”	article
The Future of Belonging won \$5,000 to create dolls that use artificial intelligence to listen to students’ concerns and provide data to counselors. (University of Pittsburgh)	Interesting local project that was recently funded. I’m not sure what the status of the project is thus far. <u>The Goldman Prize: Entrepreneurship for Education</u> On September 25, 2017, teachers, counselors and graduate students presented their entrepreneurial ideas before a “Shark-Tank” style panel of judges to battle for coveted funding to address problems in education through innovation. Renée and Richard Goldman, who are alumni of Pitt’s School of Education, sponsored the contest. Judges awarded \$30,000 in funding among three winners of the event. Peervial 3-D Digital Design Critique took home the top prize of \$15,000 for the development of an application that allows large groups of students and teachers to map and annotate 3-D digital designs from an internet browser. Triple Note, a Data Collection and Instruction App, won \$10,000 for an application to help field researchers store and access data, video, images, audio and other information in a since cloud based source. The Future of Belonging won \$5,000 to create dolls that use artificial intelligence to listen to students’ concerns and provide data to counselors.	project
<u>Generation AI: What happens when your child’s friend is an AI toy that talks back?</u>	Article about Cayla the “internet-connected doll that uses voice recognition technology to chat and interact with children in real time. Cayla’s conversations are recorded and transmitted online to a voice analysis company.” Challenges and issues are arising around and “setting off alarm bells around privacy, bias, surveillance, manipulation, democracy, transparency and accountability.” Also who owns the data? Another important aspect of this article brings attention towards creating agile governmental models to respond to regulating algorithms.	article

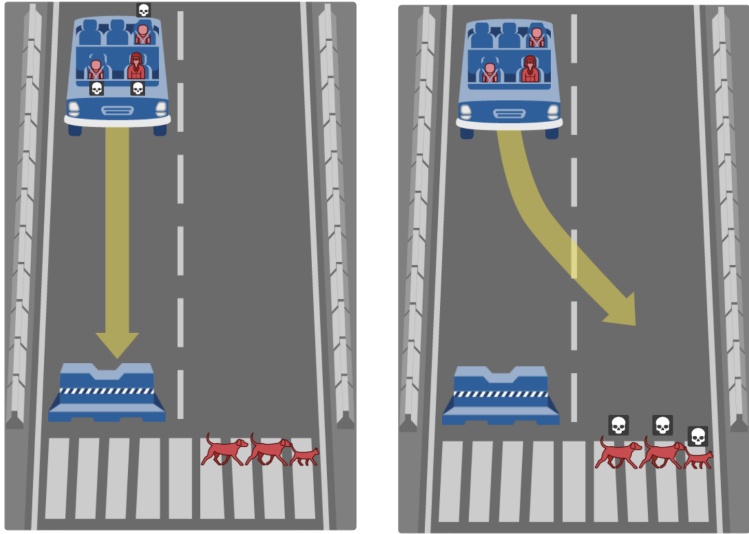
<u>Difference between Artificial Intelligence and Machine Learning</u>	 The infographic '3 Stages of AI' illustrates the progression of artificial intelligence. It features three circular icons: a simple robot for 'Narrow AI', a robot with a screen for 'General AI', and a more complex robot for 'Super AI'. Below each icon is a description: 'Dedicated to assist with or take over specific tasks' for Narrow AI, 'Takes knowledge from one domain, transfers to other domain' for General AI, and 'Machines that are in order of magnitude smarter than humans' for Super AI.	Image, article
<u>The “Intelligent” Cloud: How AI is changing the face of Cloud Computing</u>	 The 'Analytics Curve' diagram shows the evolution of data analytics. It starts with 'Descriptive Analytics' (Hindsight: What Happened) and moves through 'Diagnostic Analytics' (Insight: What Happened and Why), 'Operational Analytics' (Foresight: What Will Happen, When, and Why), 'Predictive Analytics', 'Prescriptive Analytics', and 'Cognitive Analytics' (Advanced Analytics). The curve is labeled 'ANALYTICS CURVE' and ends with a large blue arrow pointing up labeled 'AI'. The diagram is divided into 'Today' and 'Emerging' sections.	Image, article
What is AI?	<u>IBM video</u> - this is a pretty decent and pithy explanation <u>BBC video</u> - this is a little too comical and the music is too loud, but it is ok <u>intel video</u> - more detailed, but dryer, and provides historical context	Video
Related Videos/Talks	<u>How AI can save our humanity</u> - pretty optimistic and heartwarming TED Talk <u>What AI is --- and isn't</u> - more of a business perspective <u>AI and Ethics: People, Robots and Society</u> - Very good discussion that goes into depth about ethical considerations in AI.	Video
<u>From professors to prime ministers, Kay Firth-Butterfield of the World Economic Forum is ensuring global leaders are talking about socially responsible AI development.</u>	<i>“One of the projects that I’m doing here at the World Economic Forum is a project with AI professors from around the world where <u>we are trying to ensure that every student’s AI curriculum includes some training on ethics and the social impact of AI.</u> The intent is that those people who are being asked to develop things or who are setting up their own businesses using AI have at least some background training on the ethical implications.”</i> – Kay Firth-Butterfield, World Economic Forum	Article

	 Jennifer Lanas @educateyinz Following #MustRead Ethics and the Social Impacts of AI Consider: ✓ Bias ✓ Transparency ✓ Accountability ✓ Privacy ➡ How might we initiate a conversation adopting policy + education around AI that will benefit humanity and the planet? #thefluencyproject	
<u>American Innovations</u> <u>Podcast: AI</u>	Episode Info Artificial Intelligence is no longer the stuff of science fiction. And it's about to get much more powerful: machines that can reason, create, predict the future, even dream. AI is likely to be one of the most transformative technologies of the 21st-century. This is the first in our four-episode series about the rise of artificial intelligence and humanity's quest to breathe intellectual life into computers. In this episode, we're going to meet the mavericks who first dreamed of a world where machines capable of being smarter than the people who created them. And what better way for smart machines and their creators to face off in a battle of wits -- than by playing chess?	Podcast
<u>Robot Automation: The Denial of the East, the Panic of the West, and the Question No One Wants to Answer</u>	Blog post from Tech 2025 on people's responses worldwide to robot automation and job loss--this seemed interesting because it looked at our inability globally, to understand the implications of AI.	Article (blog)
<u>With Mr. VR, and AR, Humans and Machines Will Unite in the Workforce</u>	An optimistic take on the ways humans will use virtual reality and augmented reality in combination with robotics, artificial intelligence, etc. to engage in construction. The argument is, the devices will disappear and new, small headsets will make the use	Article (blog)

	of data, holograms, etc. more a part of the overall design process.	
<u>1A: Where Pittsburgh Meets AI</u>	An episode of 1A, a show on NPR, featuring Pittsburgh's journey with artificial intelligence.	Radio podcast
<u>Screenagers</u>	A documentary film, not directly on AI, but focusing on the impact of technology on young people and their families. Practically useful, family-friendly resources, as well as research on brain impact.	Documentary and website
<u>Ethics and Robotics Course Materials</u>	Illah Nourbakhsh's Ethics and Robots course materials, open-sourced.	Wikisite
<u>Human Or Machine: Can You Tell Who Wrote These Poems?</u>	Perhaps we could test ourselves to see if we could spot the human or computer-generated poetry...	Interactive article
<u>Don't Grade Teachers With a Bad Algorithm</u>	I'm still looking for the article that is not blocked by a paywall. :(	Article
<u>How Far Off Is the Singularity?</u>	A series of scientifically informed positions on the singularity	Article (blog)
<u>The Automation Charade</u>	A critique the ideology of automation and the myth of human obsolescence.	Article
<u>AI at Google: our principles</u>	Google's principles for AI research and development	Article
<u>Humans</u> (AMC series) - description And here's <u>an essay on Vulture</u> about the show	Here's a description of the series: Humanoid Synthetics have become an inextricable part of society, obediently serving and protecting the human population. But what happens when these Synths are given the right to consciousness and their own free will? One year after the dawn of consciousness, a decimated and oppressed Synth population fights to survive in a world that hates and fears them.	
<u>Altered Carbon</u>	Netflix series taking place in the future that centers on the ability to transfer one's own consciousness infinitely thus delaying "real death". This ability is reserved for people with extensive financial resources thus exacerbating a set of cultural and social biases.	Netflix show
<u>Robots Won't Replace Instructors, 2 Penn State Educators Argue. Instead, They'll Help Them Be 'More Human.'</u>	Discussed the 'humanizing' effect of teaching with the thoughtful implementation of AI in classrooms	Article
<u>Intelligence Without Representation</u>	This report describes research done at the Artificial Intelligence Laboratory of the Massachusetts Institute of Technology. In this	Report

	paper they outline their approach to incrementally building complete intelligent Creatures.	
<u>How To Teach Artificial Intelligence Some Common Sense</u>	Article discusses the complexities of human intelligence as related to deep learning design models.	Article
<u>A Proposal for the Stanford Summer Research Project on Artificial Intelligence</u>	1955 Proposal on the Research of Artificial Intelligence	ACADEMIC report
<u>Coursera Co-Founder Andrew Ng Wants to Bring 'AI to Everyone' in Latest Course</u>	Courses open AI course discussion on the whys and hows of educating everyone about AI	
<u>The Most Important Skills for the 4th Industrial Revolution? Try Ethics and Philosophy.</u>	An argument for ethics and a broader philosophical discourse in contrast to the 'coding' and technical training very common in contemporary ed talk	
<u>http://www2.ncte.org/statement/genderfairuseoflang/</u>	A good starting point for gender inclusive language and letting go of the binary by normalizing they pronouns. How is AI acting as a socializing agent? Would incorporating this document into the dialogue help to reframe the dialogue in more inclusive ways?	position statement
<u>http://www.chilton-computing.org.uk/inf/literature/reports/lighthill_report/contents.htm</u>	The Science Research Council has been receiving an increasing number of applications for research support in the rather broad field with mathematical, engineering and biological aspects which often goes under the general description Artificial Intelligence (AI). The research support applied for is sufficient in volume, and in variety of discipline involved, to demand that a general view of the field be taken by the Council itself. This is the report.	Research Report
<u>Google's New AI Is a Master of Games, but How Does It Compare to the Human Mind?</u>	Comparing human and machine intelligence characteristics	Smithsonian article
<u>https://ainowinstitute.org/AI_Now_2018_Report.pdf</u>	A short article about this report came up on linkedin, and I thought it might be good to read in its entirety. scary word of the day: affect recognition. <u>https://gizmodo.com/the-five-most-worrying-trends-in-artificial-intelligenc-1830945466</u>	policy recommendations

<u>Dangers of AI</u>	This recent article by Michael K. Spencer, a futurist, appeared first in <i>Future Sin</i> , then in <i>Medium</i> . It identifies 5 dangers for 2019.	article
<u>Is this AI? We drew you a flowchart to work it out</u>	Breaking down the definition of AI	article
<u>Silicon Valley Is Turning Into Its Own Worst Fear</u>		article
<u>How Much of the Internet Is Fake? Turns Out, a Lot of It, Actually</u>		article
<u>People's Guide to AI</u>	From Allied Media Conference	workbook
<u>How a Feel-Good AI Story Went Wrong in Flint</u>		article
<u>How Artificial Intelligence Enables the Economics of Abundance</u>		article
<u>A Business With No End</u>		article
<u>Rising Instagram Stars Are Posting Fake Sponsored Content</u>		article
<u>China's "Social Credit System" Has Caused More Than Just Public Shaming (HBO)</u>		video
<u>How Scammers in China Manipulate Amazon</u>		article
<u>The Subliminal Trick Netflix Uses to Get You to Watch Its Movies & Shows</u>		article
<u>The Economics Of Artificial Intelligence - How Cheaper Predictions Will Change The World</u>		article
<u>Automation and Artificial Intelligence: How machines are affecting people and</u>		

places		
US Army AI Task force at CMU	Still new (02/2019) still vague, still uncertain. Keep tabs on it.	Article #local
‘Building machines that learn and think like people		Article
Building Machines That Learn and Think Like People		Accompanying Video
7 Short-Term AI ethics questions		Article
https://www.ted.com/talks/cesar-hidalgo-a-bold-idea-to-replace-politicians	scary, hopefully not inevitable. Bottom up tyranny?	video.
Hidden Brain: Love, Sex and Robots	What are the possibilities for deep, intimate relationships with artificial lovers? Based on a book: Turned On, Science, Sex and Robots by Kate Devlin	podcast
MIT Moral Machine	What should the self-driving car do? 	Game / Quiz
https://trustarts.org/product/on/62618/ai-getting-beyond-clashes-with-molly-wright-stenson https://www.alphabcity.org/events/outside-the-academy	Two events on AI in the near future. All from CMU. Perhaps they have that as a major?	events

-series-artificial-intelligence-ethics/		
http://danielarus.csail.mit.edu	The person who gave the robot lecture at CMU.	link to bio
https://www.wired.com/story/how-we-learn-computer-science-ethics/?mbid=email_onsiteshare	Teaching Ethics with Science Fiction	Wired article