
Blossom Academy

Accra-Ghana

Kigali-Rwanda

Lagos-Nigeria

AI Foundations: Thinking, Reasoning & Communication

OVERVIEW

Harness the power of AI tools ChatGPT, Claude, Gemini, and more, to think more clearly, reason more rigorously, and communicate more effectively. Build the confidence and credibility to use artificial intelligence strategically on the job.

This programme teaches you how to use AI not as a shortcut, but as a thinking partner. It was created for managers, analysts, digital marketers, product managers, and professionals across all functions who want to move beyond surface-level AI use and develop the intellectual foundations that make AI truly powerful.

You will work with leading AI tools, validated research frameworks, and real-world scenarios to analyse problems, structure prompts, interrogate outputs, and present AI-assisted insights to stakeholders. The programme culminates in a capstone presentation of your AI-powered professional project.

By the end of the course, you will be able to

- Run AI-assisted research that is thorough, reliable, and ready for professional use.
- Audit AI outputs - catching errors, false information, and bias before they cause problems.
- Produce executive-level briefs that turn AI-generated work into clear, confident recommendations.
- Design AI workflows that fit your role and make your day-to-day work faster and sharper.
- Write prompts that get you accurate, useful responses every time.
- Present AI-assisted work clearly and credibly to any audience in your organisation.

To assess your skills, you must:

- Attend all class sessions throughout the course.
- Complete all homework assignments.
- Complete and present your final project.

Upon passing this course, you'll have a certificate of completion.

PREREQUISITE

This is a beginner-friendly programme with no technical prerequisites. You do not need to code. If you are new to AI tools, your admissions officer may recommend completing a short orientation session before the first class.

The programme is also well-suited for:

- Technical professionals (CIOs, IT managers, data analysts) who want to understand AI's strategic implications
- Managers and business leaders looking to build AI literacy across their teams
- Creators, marketers, and entrepreneurs already using AI tools who want to deepen their practice

The course also requires

- Your laptop (PC or Mac). It must be at most four years old and able to run the most recent operating system.
- If remote, a webcam, headphones, and reasonable access to the internet are required.

Our Admissions team can discuss your background and learning goals to advise if this course fits you.

CAPSTONE PROJECT

For the AI Foundations capstone, you will address a real challenge from your professional context using AI tools and the reasoning frameworks developed throughout the programme.

You will select a meaningful problem, apply structured thinking to frame it, use AI tools to research and generate insights, validate the outputs, and present a clear, evidence-based recommendation to your classmates and instructional team.

Students share their results, and each creates a presentation that includes:

- A structured problem framing using the First Principles Thinking (Week 2)
- A documented prompt strategy showing at least 3 iterations and what improved (Week 3)
- An AI output validation audit, identifying any errors, bias, or hallucinations encountered (Week 4)
- Ethical considerations and responsible use decisions made during the project (Week 5)
- A clear, stakeholder-ready recommendation presented using the BLUF structure (Week 6)

Our instructors are available to validate the feasibility of your project and manage its scope.

PRE-WORK

Welcome to AI Foundations: Thinking, Reasoning & Communication.

These recommended self-paced resources will help you arrive prepared for Week 1, which can be completed in 1–2 hours and is freely accessible online.

Introduction to AI Tools

Please complete the following before Week 1;

- Register: Sign up for free versions of ChatGPT, Claude, and Gemini.
- Experiment: Run a "side-by-side" comparison. Ask all three AI assistants the same question and note which style resonates most.
- Brainstorm: Pinpoint one real-world "pain point" in your daily workflow. This will be the live project throughout the program.
- Learn (Optional): If curious about the "brain" behind the bot, check out a quick [5-minute](#) video on LLM fundamentals.

AI Model Benchmarks & Comparison

Visit Artificial Analysis (artificialanalysis.ai) and explore the model comparison dashboard. Review how leading models, including ChatGPT, Claude, and Gemini, differ across intelligence, speed, price, and context window. No prior knowledge needed: the site is designed for non-technical users. Come to Week 1 ready to discuss what you noticed.

DURATION

6 weeks

CONTENT

Week 1	The AI Ecosystem & How It Works	<i>Build a grounded understanding of artificial intelligence: its history, landscape, and how the technology actually works.</i> What is Artificial Intelligence? • AI as a pattern recognition and prediction tool • AI vs automation (simple real-world examples) • Where AI already shows up in daily work (reports, emails, dashboards, customer support) How AI Models Work • How tools like ChatGPT generate responses (simple explanation) • Tokens and prompts (why wording matters) • AI outputs are probabilities, not facts Comparing AI Models • Key dimensions: intelligence, speed, price, and context window • Using Artificial Analysis to benchmark models objectively • Selecting the right model for the right task; different tools for different tasks (e.g., writing, analysis, coding) AI in Your Professional Context • Where AI is already embedded in business workflows • AI as a thinking partner, not a replacement • Why structured human thinking determines AI value • Ethical considerations: bias, transparency, and privacy AI Literacy & Decision-Making • Understanding how AI works and why it makes mistakes • Knowing when and where to use AI in your role • Evaluating tools based on task, risk, and impact
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	Project	AI Landscape Map - Research and present a one-page visual comparing 3 AI tools relevant to your industry or professional role. For each tool, identify: what it does well, its key limitations, and one concrete use case. Present to the class and give and receive peer-to-peer feedback.
Week 2	How Professionals Actually Think with AI	<i>Learn to think before you prompt — the cognitive foundation that makes AI outputs genuinely useful.</i> First Principles Thinking • Define the problem clearly • Break the problem into fundamental components • Identify the basic facts and truths • Challenge existing assumptions • Build the solution from the fundamental truths Problem Decomposition • Breaking vague questions into structured, actionable steps • Identifying relevant vs. irrelevant information • Converting ambiguous briefs into clear analytical plans • First principles and inversion as decomposition tools Iterative Reasoning • Why does good reasoning evolve through multiple steps • Plan → Execute → Evaluate → Update → Repeat • Refining conclusions based on intermediate results • Adaptive decision-making as new insights emerge Externalizing and Communicating Thinking • Making reasoning visible, traceable, and verifiable • Documenting analytical steps and decision paths • Evidence-based conclusions: justify before you answer • Presenting reasoning chains that others can follow and critique. Critical Thinking & Problem-Solving • Breaking down problems before using AI • Questioning and validating AI-generated ideas • Structuring reasoning to improve outcomes
	Project	Reasoning Chain Audit — Take a complex problem from your professional context. Apply the First Principles Thinking to plan your approach, then use an AI tool to execute it, documenting every intermediate step. Deliverable: a 1-page annotated reasoning chain showing how you reached your conclusion. Present to the class, giving and receiving peer-to-peer feedback.
Week 3	Prompt Engineering — From Basic to Advanced	<i>Communicate with AI as a discipline: writing prompts with clarity, context, and strategic intent.</i> Basic Prompt Engineering • What is a prompt, and how do prompts shape AI responses

		• Anatomy of an effective prompt: context, task, format, constraints • Refinement and examples: improving prompts for better outcomes Intermediate Prompting • Specific task framing and role/context setting • Domain-specific prompting and creativity stimulation • Interconnected reasoning and ethical considerations • Designing workflows – embed AI into tasks, processes, and decision-making efficiently to get consistent, practical results. Advanced Techniques • Chain-of-thought and few-shot prompting • Multi-turn conversations and complex task framing • Applying analytical frameworks and balancing structure with creativity Communication with AI • Writing clear, structured prompts • Reducing ambiguity to improve outputs • Iterating prompts for better results
	Project:	Prompt Engineering Portfolio — Select a real task from your professional role and build a prompt library of 10 reusable templates tailored to your context. Present your 3 most effective prompts to the class, explaining the structure, intent, and output quality of each. Give and receive peer-to-peer feedback.
Week 4	Interrogating & Validating AI Outputs	<i>Become a critical and confident consumer of AI-generated content — know when to trust, verify, refine, or reject.</i> Why AI Outputs Can Be Wrong • How LLMs generate text — and why errors occur • Hallucinations: what they are and why they happen • Bias in training data and how it surfaces in outputs • Data limitations, knowledge cutoffs, and outdated information • The risks of over-reliance on unverified AI outputs Fact-Checking and Verification Frameworks • Triangulation: verifying a claim across 3 independent sources • Source quality assessment: primary vs. secondary sources • Cross-checking AI data outputs against raw datasets • Identifying fabricated citations and invented statistics • Building a Personal AI Verification Checklist Bias and Responsible Consumption • Types of bias in AI outputs: representation, framing, omission

		- Spotting bias in AI-generated reports, summaries, and recommendations - Evaluating AI outputs in high-stakes decisions: hiring, finance, health - Structured audit process: a repeatable checklist for AI validation Analytical Judgment - Assessing the accuracy and reliability of outputs - Identifying bias and weak reasoning - Making informed decisions using AI outputs
	Project:	AI Audit Report — Apply a structured validation process to 3 AI-generated outputs (a data summary, a business recommendation, and a written analysis). Produce a 2-page audit report identifying errors, hallucinations, or bias — with evidence and recommended corrections. Present findings to the class, giving and receiving peer-to-peer feedback.
Week 5	AI Ethics, Governance & Responsible Use	<i>Use AI safely, fairly, and legally — build trust with stakeholders and reduce organisational risk.</i> Core Ethical Principles - Fairness & Bias – Understand how bias appears in data and AI outputs. - Accountability – Human oversight is required for high-stakes decisions. - Privacy & Safe Use – Don't input personal, confidential, or sensitive information. How Risks Happen in Practice - Untrustworthy outputs – AI can give inaccurate or misleading information. - Automation bias – Avoid over-trusting AI; verify important decisions. - Red flags – Inconsistent answers or a lack of sources signal risk. Responsible AI Use - What not to input – sensitive or proprietary data. - When to verify – always check AI outputs for accuracy. - Human oversight – essential in hiring, finance, healthcare, or strategic choices. - Decision thresholds – define when AI outputs are reliable enough to act on. - Confidence levels – low (research), medium (verify), high (act with oversight). - Risk-aware decisions – balance speed vs accuracy and escalate when necessary. Local Data Governance (Africa Focus) Understand how regional data protection laws shape responsible AI use:

		- Personal and client data should not be entered into AI tools without proper authorization. - Personal data should be handled responsibly and used only with clear consent. - AI outputs involving personal data should be reviewed before use. Examples of relevant legislation across Africa include Nigeria - NDPR, Ghana - Data Protection Act, and Rwanda - Data Protection Law, among others. Adaptability & Ethical Thinking - Adapting to new tools and evolving workflows - Applying AI responsibly in real-world contexts - Managing risk, privacy, and bias
	Unguided Project	Apply the Ethical AI Decision Model to 3 real-world workplace scenarios involving AI — one in hiring, one in content creation, and one in a high-stakes operational decision. For each, document the ethical risks identified, the decision made, and the reasoning behind it. Present to the class, giving and receiving peer-to-peer feedback.
Week 6	Communicating Insights & Driving AI Strategy	<i>Turn AI-assisted thinking into clear, credible communication and strategic organizational impact.</i> Communicating AI Insights - The BLUF principle: Bottom Line Up Front - Structuring AI-assisted reports and recommendations for stakeholders - Adapting the same insight for technical vs. executive audiences - Eliminating jargon: communicating AI findings in plain language - Using visuals and dashboards to support AI-powered recommendations Building an AI Business Case - What decision-makers need to approve AI initiatives - ROI, risk, and organizational readiness assessment - Designing experiments to evaluate AI impact - Interpreting results from controlled AI experiments - Unified metrics and adoption strategies for AI at scale Your Personal AI Workflow - Mapping AI tools to your specific professional tasks - Building repeatable, responsible AI-assisted workflows - Setting personal boundaries for AI use on the job - Combining AI tools with human judgment effectively - Positioning yourself as an AI-fluent professional Capstone Preparation - Structuring your capstone using all 6 weeks of frameworks

		• Framing a real problem with the First Principles • Documenting prompt strategy and output validation • Presenting a stakeholder-ready recommendation using BLUF • Peer critique: strengthening each other's AI communication Strategic Thinking & Impact • Identifying high-impact use cases for AI • Turning AI outputs into actionable insights • Using AI to improve productivity and decision-making
	Unguided Project	Transform an AI-generated data summary into a polished, stakeholder-ready executive brief. Practice adapting the same insight for 3 different audiences: a technical team, a senior manager, and a board-level executive. Receive structured peer feedback on clarity, precision, and persuasiveness.