MODULE 1

What is AI?

Understanding Artificial Intelligence

STUDY GUIDE

AI Ethics for Higher Education

EduPolicy.ai / ScholarBar Education LLC

1 The Three-Part Test

A machine has AI if it can **interpret** data, **learn** from that data, and **adapt** to achieve goals. All three are required. Missing one means it's just software following instructions — like a calculator that gives the same answer every time regardless of context.

2 AI vs. Not AI

IS AI: Email spam filters, Netflix recommendations, ChatGPT/Claude, phone autocorrect — they all interpret, learn, and adapt.

NOT AI: Handheld calculators, digital alarm clocks, fixed-timer traffic lights, standard thermostats — same input always produces same output.

3 The 6-Step AI Pipeline

Every AI is built through six stages: **Collect** data → **Prepare** (clean) it → **Choose** a model → **Train** on the data → **Evaluate** performance → **Deploy** to users. Bias can enter at every single stage. The "black box problem" starts at model selection — the more powerful the model, the less anyone can explain its decisions.

4 LLMs Are Prediction Engines

Large language models (ChatGPT, Claude, Gemini) predict which word is most likely to come next based on patterns in training data. They do not understand, verify, or reason. A sentence like "The first person to walk on Mars was..." will get a confident answer — even though nobody has walked on Mars. **"Convincing" does not mean "correct."**

5 Open-Source vs. Closed-Source

Open-source (Llama, Mistral): Code is public, runs on your hardware, data stays local, anyone can audit for bias. Risk: no built-in guardrails.

Closed-source (GPT-4, Claude, Gemini): Proprietary, your prompts go to company servers, you trust their safety claims. Trade-off: convenience vs. transparency.

6 Hallucinations Are Structural

AI regularly fabricates citations, statistics, and facts with identical confidence to real information. A fake journal article is just as statistically "probable" as a real one — the model generates both the same way. You cannot tell the difference by looking. You can only tell by **independently verifying every claim**.

7 AI Use = Your Responsibility

Academic integrity policies hold you responsible for everything you submit, regardless of what tools you used. "The AI told me" is not a defense. Before using AI for any academic work: verify all citations, check your institution's AI policy, and be transparent about your process.