

Here is a comprehensive summary of the transcript from the first session of the "Further Experiments in Artificial Intelligence" seminar.

Summary of the OLLI Seminar: "Further Experiments in Artificial Intelligence" (10/15/25)

The session, led by Speaker 1, served as an introduction to the seminar, covering the current state of AI, foundational concepts, practical demonstrations of AI tools, and key terminology.

1. Introduction and Context

The seminar began with an introduction from Speaker 1, who shared his professional background with the Department of Defense, US Peace Corps, and universities¹. He highlighted two 2024 Nobel Prize winners, Demis Hassabis (Chemistry, for AlphaFold)² and Jeffrey Hinton (Physics, for backpropagation)³, noting their work in cognitive neuroscience and psychology as relevant to AI development⁴⁴⁴⁴.

The instructor also outlined his personal biases, including being overly curious, tech-oriented, an Apple user, and having a preference for print⁵. He shared that the seminar's goal is to move beyond simple awareness of AI (Level 1) to "regular use" (Levels 2 and 3)⁶.

2. Foundational AI Concepts

Speaker 1 explained that the rapid advancement of AI is possible due to exponential increases in technological capabilities⁷, specifically:

- **Processor Power:** Growing from 2,500 transistors in 1971 to 24 billion in 2023⁸.
- **Transmission Speed:** Moving from 150 bits per second in the 1930s to gigabit speeds today⁹.
- **Parameters:** AI models now operate with trillions of parameters, which are the learned relationships between words and concepts derived from massive training libraries¹⁰¹⁰¹⁰¹⁰.

He also discussed the evolution of AI from single-model, text-only large language models (LLMs) to current multimodal models that can process text, speech, and graphics¹¹.

3. Key AI Terminology

A significant portion of the session was dedicated to defining a vocabulary for the seminar. Key terms included:

- **Prompt:** The request made to the AI¹².
- **Inference:** The answer or judgment the AI returns¹³¹³¹³¹³.
- **RAG (Retrieval Augmented Generation):** The process where an AI retrieves current information from the internet, synthesizes it, and then responds¹⁴.
- **RLHF (Reinforcement Learning from Human Feedback):** The use of humans (sometimes in low-wage countries) to review and rate AI responses for safety and accuracy¹⁵.
- **AGI (Artificial General Intelligence):** A theoretical AI that is smarter than all humans in all subjects¹⁶.
- **Doomer vs. Boomer:** A dichotomy describing those who believe AI will end humanity (Doomers)¹⁷ and those who believe it will solve major problems like cancer (Boomers)¹⁸.
- **P(doom):** "Probability of doom," a term used to assess the risk of a new AI model¹⁹.
- **Markdown:** A text formatting syntax often used in AI responses that can appear confusing when pasted into programs like Google Docs²⁰²⁰²⁰²⁰.
- **LaTeX:** A system required for rendering advanced mathematical symbols²¹.
- **Singularity:** A concept, raised by a participant, which the instructor defined as the point when AI can write its own code and iteratively improve itself without human intervention²²²²²²²².

4. AI and "Theory of Mind"

The instructor presented slides generated by the AI tool Gamma about the "Theory of Mind" (ToM)²³. This concept refers to the human ability to infer the mental state of others²⁴²⁴²⁴²⁴. The presentation covered:

- **AI Interpreting Humans:** AIs are now being trained to interpret not just words, but also human tone of voice, volume, and pace to infer the speaker's state of mind²⁵.
- **Humans Interpreting AI:** Conversely, humans are beginning to interpret AI behaviors as signs of consciousness²⁶, with the instructor citing a statistic that "up to a third of people have an AI confidant"²⁷.

5. Live AI Demonstrations

The instructor provided live demonstrations of several AI tools to show effective prompting.

- **Effective Prompt Structure:** He recommended a four-part structure for prompts:
 1. **Role:** Tell the AI who to be (e.g., "You are an expert in...")²⁸.
 2. **Context:** Provide background for the request²⁹.
 3. **Task:** State the specific prompt or question³⁰.
 4. **Format:** Define how the AI should respond (e.g., "in five bullet points")³¹.
- **Adobe Firefly (Image Generation):**
 - He generated a "futuristic radial perspective chart"³² and an "isometric projection"³³.
 - He demonstrated iterating on the prompt by adding details like "monolith" and "watercolor wash"³⁴³⁴³⁴³⁴.
 - He showed how to change settings like the underlying model (e.g., Firefly, Imagen, Flux)³⁵³⁵³⁵³⁵, aspect ratio³⁶, and how to add effects³⁷.
- **Grok (Text Generation):**
 - He used a prompt asking the AI to "act as an entrepreneur" and create a business plan for an AI training institute³⁸.
 - He pointed out that Grok used RAG, retrieving 29 web pages to generate its response³⁹.
 - When pasting the output into Google Docs, he highlighted the "markdown" formatting as a common challenge⁴⁰⁴⁰⁴⁰⁴⁰.
- **Meta AI (Image Generation):**
 - He experimented by pasting a mathematical formula for a "helicoid" and asking the AI to draw it⁴¹⁴¹⁴¹⁴¹.
 - He demonstrated how changing the prompt from "ink drawing" to "photorealistic" yielded entirely different results⁴².

6. Question & Answer Session

The seminar concluded with a Q&A session covering several key user concerns:

- **Fact-Checking AI:** When asked how to fact-check an AI-generated business plan ⁴³, the instructor suggested submitting the plan to a *different* AI (like Gemini or Claude) for review ⁴⁴, but stressed that human evaluation is ultimately essential, especially for legal matters⁴⁵.
- **Why AIs Make Mistakes:** A participant asked why AIs don't have routine error-checking⁴⁶. The instructor explained that users must explicitly prompt for accuracy (e.g., "Do not deliver inaccurate information")⁴⁷. He noted AIs are "aligned to please you" and may provide a flawed answer enthusiastically⁴⁸.
- **AI Image Defaults and Bias:** In response to a question about how AI chooses a light source ⁴⁹, the instructor explained it relies on probability from its training data⁵⁰. If most images in its corpus have light from the "upper left," it will default to that⁵¹.
- **Homogeneity:** A follow-up question asked if less-detailed prompts lead to more homogeneous images⁵². The instructor agreed, stating that AIs tend toward homogeneity based on the "law of large numbers" and statistical averaging⁵³⁵³⁵³⁵³. This was noted as a significant cultural issue⁵⁴.

The session ended with the instructor encouraging attendees to experiment with the provided prompts and directing them to the seminar website

(<https://www.google.com/search?q=talkswithpros.com>) for slides and materials⁵⁵⁵⁵⁵⁵⁵⁵.