

Here is a summary of the transcript for Session 4 of "Further Experiments in Artificial Intelligence"¹, organized by topic for reader comprehension.

1. 🎤 Initial Technical Difficulties

The session began with significant technical difficulties². Speaker 1 (James) had a severe audio echo³³³³³³³³³³ that the group spent several minutes troubleshooting⁴. The issue was ultimately resolved when Speaker 1, who was sharing his screen, turned off the "share sound" option in his Zoom settings⁵⁵⁵⁵⁵⁵⁵⁵⁵.

2. 🖼️ AI Tool Demo: Google Gemini (Image & Video)

After resolving the audio issues, Speaker 1 demonstrated the paid version of Google Gemini⁶⁶⁶⁶ by performing live image restoration and generation:

- **Photo Restoration:** He uploaded a scanned photo of his mother from the 1930s⁷⁷⁷⁷.
- **Iterative Editing:** He first asked Gemini to "restore" the image, which removed the major cracks⁸. He then iteratively asked it to remove more cracks⁹ and finally to "remove the dust marks" from her face¹⁰¹⁰¹⁰¹⁰.
- **Video Generation:** He then saved the restored image¹¹ and, in a new chat, used Gemini's video tool to animate it¹²¹²¹²¹². The AI generated a short, 7-second video¹³ that animated the profile, which Speaker 1 found "amazing"¹⁴.

3. ⚠️ Key Discussion: AI Hallucinations & Limitations

Speaker 1 presented a "taxonomy of hallucinations"¹⁵ and discussed errors he has personally experienced with AIs:

- **Factual & Citation Errors:** He noted AIs can produce inaccurate or outdated legal citations¹⁶¹⁶¹⁶¹⁶.
- **Code Generation:** He has tried using AIs for Python and HTML, finding that ChatGPT in particular has "innumerable flaws" ¹⁷.
- **Formatting Errors:** He has encountered many instances, especially in Gemini, where the AI claims to have included a file or example but fails to post it¹⁸.
- **Human Comparison:** Speaker 1 asserted that humans "hallucinate" far more, claiming AIs are down to a 2-3% error rate while humans "make errors all the time" ¹⁹¹⁹¹⁹¹⁹.
- **"AI Slop":** In the final Q&A, Speaker 4 (Carl) raised the concern that if everyone bases decisions on AI-generated "Cliff Notes versions," information quality will degrade²⁰²⁰²⁰²⁰. Speaker 1 agreed with this risk, calling it "AI slop"²¹.

4. 📁 AI Tool Demo: Google Notebook LM

Speaker 1 introduced Google's Notebook LM²²²²²²²², a tool for uploading and querying a personal set of documents.

- **Function:** He explained that the free version is limited to 20 files, while the paid version allows 200²³.
- **Live Demo:** He opened a notebook containing over 150 of his personal Google Docs, many related to math²⁴.
- **Querying:** He asked the notebook, "What Math functions and formulas have I collected?"²⁵. The AI successfully queried all 156 documents and provided a categorized list, correctly formatting the complex math symbols using LaTeX²⁶.
- **Other Features:** He also demonstrated the mind map generation tool, which produced a "chaotic" but potentially useful visual of his documents²⁷²⁷²⁷²⁷. He plans to share his notebook on the Union Pacific Railroad yard with attendees who have Gmail addresses²⁸.

5. 📺 Video & Discussion: AI and the Job Market

The class watched a NewsHour video featuring former Labor Secretary Robert Reich discussing AI's impact on jobs²⁹²⁹²⁹²⁹.

- **Reich's 3 Job Categories:**
 - **Making:** Already largely automated³⁰.
 - **Thinking:** Most at risk from AI (e.g., doctors, lawyers, accountants)³¹.
 - **Caring:** Safest, as they rely on human empathy (e.g., childcare, nurses, psychotherapists)³².
- **Reich's Advice:** He advised that "versatility" and "adaptability" are now the most important skills³³³³³³³³ and suggested Universal Basic Income (UBI) may become a necessary policy³⁴.
- **Group Discussion:**
 - **Replacement:** Speaker 4 mentioned a project by OpenAI and banks (like JP Morgan) to replace junior bankers with AI³⁵.
 - **Augmentation (Productivity):** Speaker 3 (Elena) shared an example of a friend in public relations who uses ChatGPT to summarize large commission packets, making him "more productive"³⁶³⁶³⁶³⁶.
 - **A "Caring" Job Example:** Speaker 4 (Ty) noted his daughter, a psychiatric nurse practitioner, uses AI to summarize her clinical notes, reducing 45 minutes of work to 5³⁷.
 - **Challenge to Reich:** However, Ty also observed a "proclivity" for people to turn to ChatGPT for psychotherapy, questioning how safe the "empathetic" jobs truly are³⁸.

6. 📄 AI Tool Demo: Claude (Anthropic)

Speaker 1 demonstrated the paid version of Claude³⁹³⁹³⁹³⁹, noting it was created by former OpenAI

employees focused on safety⁴⁰.

- **Features & Limitations:** He noted Claude's "big drawback" is that it will not produce *standard* images⁴¹, though it can create vector graphics (SVGs)⁴²⁴²⁴²⁴².
- **Live Demo (Summarizing Large Documents):**
 - He uploaded two large, complex PDF documents: the OECD AI policy (approx. 150 pages) and the EU AI regulation (approx. 400 pages)⁴³.
 - He prompted: "please generate 10 bullet points. these documents"⁴⁴.
 - Claude created an "artifact"⁴⁵⁴⁵⁴⁵⁴⁵—a full PowerPoint-style presentation summarizing the documents, complete with speaker notes⁴⁶.
 - Speaker 1 showed how this artifact could be downloaded as a PDF or a Markdown (.md) file⁴⁷⁴⁷⁴⁷⁴⁷.

7. ? Final Q&A

- **Prompt Specificity:** Speaker 3 (Karen) asked why Speaker 1 specified "10 bullet points"⁴⁸⁴⁸⁴⁸⁴⁸. He explained it was an arbitrary number based on his own cognitive limits, citing the 7-digit phone number as an example of the human mind's capacity⁴⁹⁴⁹⁴⁹⁴⁹. He noted that when he leaves the number open, AIs often provide only 3-4 points⁵⁰.
- **Seminar Materials:** Speaker 1 reminded attendees that materials are available on his website, talkswithcrows.com⁵¹⁵¹⁵¹⁵¹.