# Peter Danenberg

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**Senior Software Engineer** Google DeepMind (2024–)

Zero-to-one prototyping for Gemini: working features within 24 hours, demoed to Demis Hassabis, Sundar Pichai, Josh Woodward, Rick Osterloh, and Shakil Barkat.

- **Harness.** Coding agents you drive by pen and voice, not keyboard: handwrite a task on e-ink, walk away, hear the result in your earbuds. Largely built by its own agents.
- **Mneme.** The fluency of OpenAI's GPT-Live with the utility of Meta's Muse: an earbud assistant that works your mail, calendar, browser, and lights, and remembers you. Gemini Labs is writing a product spec from the demo.
- **Gemini Agent.** Gemini driving a browser to book flights and manage tasks. Built the computer-use prototype that shipped.
- **Gemini Canvas.** Live, self-contained HTML, PDF, and SVG artifacts inside Gemini. Built the prototype that shipped.
- **Little PAIPer.** A Socratic tutor for AI education that replaces textbook reading with conversation. Co-created with Peter Norvig.
- **Gemini Meetup.** Biweekly workshops I run for about 350 attendees, with more than 20 open-source demos: game-playing agents, voice companions, fine-tuning.

**Senior Research Associate** Oxford HAI Lab (2026–)

With Philipp Koralus and Edward Harcourt, on whether LLMs can carry out goal-directed, truth-seeking inquiry with people.

- **Aletheia.** An AI philosophy tutor in the spirit of the Oxford tutorial: it keeps asking until your own position holds up under questioning, instead of steering you to one.
- **Praeter-Life.** A book in progress on when a made thing becomes a companion, and what that means for LLMs. Built its evidence: 227 million records from 35 collections, Sumerian to K'iche' Maya, and a model pipeline that combs them for made beings.

**Senior Software Engineer** Google, Inc. (2013–2024)

- **Bard Extensions.** Bard reaching into Gmail, Drive, Maps, and YouTube on its own. Developed the tool-calling reasoning loop; launched to 1.8 million daily users.
- **Google Assistant.** Neural-semantic models serving about 120 million queries a day. Wrote the C++ backend; automated training and evaluation for 54 models in 18 languages.

**Senior Data Developer** TrueCar, Inc. (2011–2013)

Built, from scratch, the map-reduce platform that ingested inventory from thousands of dealerships, and the pricing models behind TrueCar's consumer app: "How much should I really pay for this 2013 Jeep Wrangler?"

**Co-founder** CrossFit Crown City (2011–2014)

Built the gym from scratch to 450 members across two locations; coached five classes a day, seven days a week.

**Senior Software Architect** Response Genetics (2008–2011)

Built, from scratch, a HIPAA-compliant lab system that took a tumor sample from intake through robotic pipetting and sequencing to a chemotherapy-response prediction for the oncologist. Worked with Roche, Pfizer, and Novartis on their clinical trials.

**Intern** Google, Inc. (Summer 2008)

Created Roxygen, R's in-source documentation system; its successor, roxygen2, which I co-author, has over 21 million downloads.

**Research Assistant** Information Sciences Institute (2005–2008)

Developed multi-agent simulation environments for computational social science.

## Talks and Publications

Danenberg, P., & South, T. (2026). Inside the Frontier Labs. *Imagination in Action, Silicon Valley.*

Danenberg, P. (2026). LLMs: Mercenary or Citizen? *AI for Good Global Summit, Geneva.*

Danenberg, P. (2026). Inversion of Control: Humans Working for AI. *MIT Science Dinner, Boston; StartSe AI Festival, São Paulo.*

Danenberg, P., & Wissner-Gross, A. (2026). Are We Treating AI Unethically? *Imagination in Action, Davos.*

Danenberg, P. (2025). How Classical Thinking Shaped Modern AI. *TEDxBoston.*

Danenberg, P. (2025). Towards a Positive Ethics of AI. *Oxford Institute for Ethics in AI.*

Danenberg, P. (2025). The Future of AI. *Magdalen College, Oxford University.*

Danenberg, P. (2025). Competence in the Age of LLMs. *TEDxCSTU.*

Danenberg, P. (2024). What is AI? *Westminster Technology Forum, House of Lords.*

Danenberg, P. (2024). Learnings on Building Gemini. *Imagination in Action, MIT; Forbes.*

Danenberg, P. (2023). *Single Parameter Driven Tunable Resource Allocation for Machine Learning Tasks* (tech. rep. No. 5812). Technical Disclosure Commons, Defensive Publication Series.

Danenberg, P. (2023). Prompt-Engineering with Bard. *Devfest, Google.*

Gemini Team, Google. (2023). Gemini: A Family of Highly Capable Multimodal Models. *arXiv preprint arXiv:2312.11805.*

Danenberg, P., & Marsella, S. (2010). Data-Driven Coherence Models. *19th Annual Conference on Behavior Representation in Modeling and Simulation 2010, BRiMS 2010.*

## Education

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| 2004–2008 | USC | Ph.D. candidate, Computer Science |
| 2002–2004 | University of Freiburg | Ph.D. candidate, Philosophy |
| 2000–2002 | Harvard University | Ph.D. candidate, Comparative Literature |
| 1995–2000 | USC | B.A., Computer Science, Classics, Philosophy, German, Piano |