Peter Danenberg

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Experience

Senior Software Engineer Google DeepMind (2024–)

Moved to DeepMind to lead zero-to-one development for Gemini (App Zero to One team), creating production-ready features within 24 hours based on insights from leadership and external biweekly meetups. Prototypes gained visibility with top executives, including Demis Hassabis and Sundar Pichai; with some advancing to production as Gemini Canvas and Gemini Agent:

- Built computer-use capabilities for autonomous agents (Gemini controlling browsers, booking flights, managing tasks) which became Gemini Agent: "order those Lululemon yoga pants I tried on last week—you remember which ones and my size."
- Built end-to-end app for rendering self-contained HTML, PDF, and SVG artifacts which became Gemini Canvas: "create a playable 3D voxel world with procedural terrain generation, block-building mechanics, and real-time physics."
- Co-created Little PAIPer (lilpaiper.ai) with Peter Norvig: a Socratic dialogue-based learning platform for AI education, replacing linear textbook reading with interactive, personalized conversations guided by Gemini.
- Organize biweekly Gemini workshops (geminimeetup.ai) with ∼ 350 attendees; created 18+ open-source demonstrations including AI gaming agents, voice companions, and fine-tuning pipelines (github.com/google-gemini/workshops).
- Built game and entertainment experiences for AR/XR through Project Astra, integrating prototype glasses with live vision and conversational AI.

Senior Research Fellow Oxford Institute for Ethics in AI (2026–)

Working with Philipp Koralus and Edward Harcourt on an adaptive learning system to supplement the Oxonian tutorial relationship; investigating whether LLMs are capable of goal-directed, truth-seeking collaborative inquiry; and whether they can ask the right number and type of questions to help people work out their own philosophical positions.

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

Worked on autonomous agents in Bard, developing the fundamental reasoning loop for tool-calling and launching Bard Extensions to 1.8 million DAU using a self-orchestrating LLM. Wrote C++ backend serving neural-semantic models for Google Assistant, handling ∼ 120 million queries per day; automated training and evaluation for 54 models in 18 languages.

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

Built a distributed map-reduce analytics platform from scratch to ingest inventory data (year, make, model, VIN, pricing) from thousands of car dealerships. Developed data pipelines and trained pricing models that powered TrueCar's consumer app, answering: "How much should I really pay for this 2013 Jeep Wrangler here?"

Co-founder CrossFit Crown City (2011–2014)

Built gym from scratch, growing to 450 members across 2 locations. Ran 5 classes daily, 7 days a week, plus one-on-one personal training.

Senior Software Architect Response Genetics (2008–2011)

Built HIPAA-compliant laboratory information system from scratch, automating workflows from sample ingestion through robotic pipetting, TaqMan assays, and sequencing to gene expression and mutation analysis. Integrated with hospital LIMS systems to deliver personalized chemotherapy response predictions to oncologists. Coordinated with Roche, Pfizer, and Novartis on their clinical trials.

Intern Google, Inc. (Summer 2008)

Created Roxygen, a documentation system for R, now widely used.

Research Assistant Information Sciences Institute (2005–2008)

Developed multi-agent simulation environments for computational social science.

Talks and Publications

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.*

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

Kahn, J., Danenberg, P., & et al. (2010). Model simulation and decision analysis with the SimR package in R. *The R User Conference.*

Education

2004–2008	University of Southern California	Ph.D. candidate, Computer Science (Research Assistant)
2002–2004	Albert-Ludwigs-Universität, Freiburg	Ph.D. candidate, Philosophy
2000–2002	Harvard University	Ph.D. candidate, Comparative Literature
1995–2000	University of Southern California	B.A., Computer Science, Classics, Philosophy, German, Piano