# Doug Fritz

PRINCIPAL ENGINEER, AI FOR SCIENCE · GOOGLE DEEPMIND

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## EXPERIENCE

### Principal Engineer, AI for Science — Google DeepMind

2025–Present

Engineering for AI for Science: systems, visualization and workflows for scientific research.

- Antigravity for Science
- Science visualization and workflows
- Prototyping in new science domains

### AIX: AI Experience Lead — Google DeepMind

London, UK  2022–2025

Led the AIX team, prototyping human-AI experiences.

- Prototypes: Project Astra, Music AI Sandbox
- Tech lead, Google AI Studio starter apps and Build tab (2024–2025)

### Head of Visualization — DeepMind

London, UK  2017–2022

Built and led the Visualization team, creating tooling for research, safety and interpretability.

- Internal visualization tooling
- Interpretability and evaluation tools
- Published visualizations for AlphaStar and Capture the Flag

## EDUCATION

### Massachusetts Institute of Technology

PhD program, Media Arts and Sciences (left for Google, 2011)
SM, Media Arts and Sciences (2010)

### Carnegie Mellon University

BFA, Fine Art (2007), University and College Honors
BS, Computer Science (2008), University Honors

## SKILLS

`Python (ML, JAX, NumPy, Pandas, Plotnine)`

`TypeScript, JavaScript, Node.js, Deno`

`Go, C++, ML Infrastructure`

`AI Systems & Tooling Architecture`

`Data Visualization & Interpretability`

`Human-AI Interaction`

`React, Lit, Angular`

`Three.js, WebGL, Graphics`

`Product & Technical Leadership`

`Design & UX Research`

`Robotics & Physical Computing`

`Fine Arts (Oil Painting, Sculpture)`

## AWARDS

### Machine Intelligence Tooling

**Google Research**

`Seattle, WA  2015–2017`

Prototyping and tooling for machine learning (TensorFlow, on-device ML).

- TensorFlow graph visualization (Best Paper, IEEE VAST)
- TensorBoard early development and design
- Google Clips: tooling, model visualization and app UI
- Colab: web components and visualization in notebooks
- DeepDream and VR experiments; exhibiting artist in DeepDream: The Art of Neural Networks (Gray Area, 2016)

### Creative Engineer

**Google Creative Lab**

`San Francisco, CA  2011–2015`

Data Arts Team: experimental websites, libraries and installations for the web.

- WebGL Globe
- Chrome Experiments
- Team projects including Just a Reflektor, This Exquisite Forest and Unnumbered Sparks

### Research Assistant

**MIT Media Lab**

`Cambridge, MA  2008–2011`

Fluid Interfaces Group: research in machine learning and data visualization.

- Topic modeling and visualization for exploring large document collections
- SpaceMarks: a zoomable workspace that learned from how people arranged their information

- IEEE VAST Best Paper (2017)
- US Patents 10,728,489 (2020) and 11,159,763 (2021), Google Clips image capture
- Phi Beta Kappa, Carnegie Mellon (2007)
- Phi Kappa Phi, Carnegie Mellon (2007)