

Education & research

Princeton

(2004-2010)

[PhD - Psychology & Neuroscience](#)

I left academia after my PhD at the [Princeton Computational Memory Lab](#) in 2010. My **H-index** is 10, with publications in [Trends in Cognitive Sciences](#) (2900 citations), [Artificial Intelligence](#), and [Neural Computation](#).

My work included [DARPA prize-winning methods](#) for [mind-reading with machine learning on brain imaging](#), development of a popular [open source toolbox for machine learning and brain imaging](#), biologically-plausible [neural network brain simulations and algorithm development](#), [human behavioural & neuroimaging experiments](#), and various [other projects](#).

Also [co-winner of the Young Investigator Award](#) (Society for Judgment & Decision-Making) for [computational modelling work](#) on decision-making.

Harvard

(2002-3)

visiting graduate student, [Frank Knox Fellowship](#), studying AI

Oxford

(1999-2002)

BA (1st-class Honours) - Philosophy, Psychology & Physiology

Employment

[Greg Detre](#)

[Consulting Ltd](#)

(2019-)

Technical advisor, coach, board member (including Unitary.ai, BekaertDeslee, Heights, GrowUp).

Coaching & strategy for C-suite and engineering leaders.

AI product development (both hands-on and leading teams), e.g. social media NSFW video content moderation, risk assessment for highly-regulated fintech; image tools for designers.

Keynote, conference and after-dinner **speaker**, e.g. at [startup/venture capital](#), media, technical, and Big 5 consultancy events. Podcast co-host of [The Data Dig](#), and author of the [Making Data Mistakes](#) blog.

[Rehearsable.ai](#)

(2023; 2024-)

Part-time co-founder, now Board Member, using LLMs to teach difficult communication skills through roleplay and expert-level feedback.

[Filtered.com](#)

(2021-2022; 2023-)

Chief Product & Technology Officer, then Board Observer, using **machine learning & AI/LLMs** for **enterprise Learning & Development** products. Led **product, software, data, and information security** teams through a major pivot into a new product category from prototype to **£2m ARR** in 2 years.

Channel 4

(2016-2019)

Chief Data Scientist, winners of [DataIQ 'Best data and analytics team of 2019'](#).

Led a dozen data scientists on a flurry of new and prize-winning data products across **advertising, personalisation, audience insights, and forecasting, worth millions** to the business.

Rebooted a failing team; designed & ran intensive and hugely successful **internal training & innovation programme**; built a strong **team culture**; key role in **data infrastructure** re-development.

Big Health/Sleepio

(2014-2016)

Chief Technology Officer, Security & Privacy - launched best-in-class [Sleepio](#) digital mental health mobile app (featured by Apple, reached #3 US iTunes Health & Fitness), and built the **team & infrastructure** to handle **sensitive data** for **Fortune 100** clients.

Multiple major rollouts, \$12m Series A from top investors in London & Silicon Valley. Responsible for engineering, data, information security. Complex replatforming. HIPAA readiness.

The Guardian

(2013)

Consultant data scientist. Advising senior management on data analysis & strategy. Helped set up large-scale data warehouse from scratch, developed novel machine learning approaches and tools to understand clusters of user behaviour, and to visualise large-scale content patterns.

Memrise

(2008-2012; 2022)

Co-founder of [Memrise.com](#), now 70m users and a global brand (e.g. [TIME world #2 EdTech company of 2024](#), overall [Best App of Google Play Award 2017](#)).

Multiple leadership roles, primarily **CTO**, also **CEO, Board Member**, with key role in strategy, fund-raising, partnerships.

Hired and managed a very successful technical team. Led design & development of **algorithms & crowd-sourced platform** for highly effective & engaging human learning at scale, with user-generated mnemonics, spaced repetition, test-driven learning, adaptive difficulty, and other pedagogical best practices. Our algorithms worked for learning languages (from Japanese's multiple alphabets, to Klingon), but also from driving theory tests to birdsong. In informal testing, Memrise improved retention by an order of magnitude (compared with staring at a textbook), and was much more addictive.

In 2022, led on world-first **LLM**-based language learning coach, using original GPT-3 API (early 2022). **Prompt engineering** was difficult (before RLHF), so we ran **AB tests with human evals** to tune the results, plus **automated evals** (especially for protecting against malicious input). Also: multi-agent architecture, and **meta-prompting** interface to generate a diverse range of prompts at scale..

Awards & honours

- *DataIQ* '**Best data and analytics team**' (2019) and many other awards at Channel 4.
- *Society of Judgment & Decision-Making* co-winner of **Young Investigator Award** (2007).
- *Frank Knox Fellowship* (2002) for study at Harvard.

Skills

LLMs, generative AI

LLM-based projects, involving complex **prompt engineering**, **multimodal** (text, images, voice, video), **human & automated evals**, **red teaming** and content moderation, **multi-agent** architectures, some training & fine-tuning.

Science, computational

Understanding of **learning & memory** (psychology, neuroscience, AI, competitive,, education & training, product development). **Experiment design & analysis** (human behavioural & brain imaging).

Neural network learning algorithms, **classification**, regression, recommender systems, **information retrieval**, clustering, dimensionality reduction, statistics, **multimodal search**, **visualisation**, hyper-parameter optimisation.

Large datasets (billions of rows), multiple domains (including text, image, 3D vision, content moderation). Many tools (e.g. PyTorch, Scikit-learn, Pandas, Tidyverse, Matlab).

Software engineering & architecture

Major **production** systems, rapid **prototyping**, **replatforming**, **delivery under pressure**.

Python, Javascript, HTML/CSS, SQL, Matlab, C#, R, Clojure, Lisp, C/C++.

Full-stack web development, **APIs**, **Linux sysadmin**, Git, CI/CD and **testing**, **cloud** (AWS/GCP/Azure), **database architecture** & administration (Postgres, MySQL, Sqlite).

Product management

Strategy, product **discovery** interviews, **analytics** & AB testing, gamification, **project management** with tight resources & strict deadlines, **prioritisation**, **Kanban/agile**, pre/postmortems.

Business leadership

Multiple cofounder and **leadership** roles (CTO, CPO, CEO), senior advisor & coach, company **strategy** and fund-raising, built & trained multiple **teams** from scratch to world-class level, expert at **rescuing** failing projects & teams. **Hired, managed, trained and mentored** dozens of junior & senior managers, engineers, data scientists, product managers, QA, and designers; on-site & across continents.

Communication & training

Professional public **speaker**: technical & non-technical; keynotes, podcast co-host, after-dinner, conferences, panels. Strong **written** communication.

Mentoring & coaching, from junior employees to startup C-suite. Led multiple forms of **training**, on **hard and soft skills**, including seminars, longitudinal team-wide training.

Security, privacy

HIPAA, ISO 27001, GDPR. Risk Assessments.

Personal interests

Improvisational drama, learning Greek, experiments in augmented intelligence, singing round a campfire.

References

Available upon request.