

Timing Liu (Tim)

Full-Stack Clinician · Founding Engineer, NHS Products & Clinical AI

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PROFILE

NHS doctor and full-stack engineer building products for clinical work. Founded health products, operate live services and build clinical-AI systems. Combines direct understanding of NHS workflows with practical product and engineering experience.

FOUNDING & PRODUCT WORK

Finomics · Co-Founder & Product Engineer

Since 2025

Co-founded cloud software for NHS rotas, pay and leave, shaped by direct experience of the problem on the frontline.

- Build across React, TypeScript, Python, Postgres, infrastructure-as-code and CI/CD.
- Developed a scheduling engine that translates NHS working-time rules into constraints, allowing the system to identify safer staffing options.
- Piloting at two hospitals, with estimated savings of about £7,500 per clinician a year.

ClinicianWiki · Founder & Full-Stack Developer

2020 to 2021

Founded and built a free, verified medical wiki where doctors could publish for patients in the open. Led product and technology as it grew into a 10-person charity, leading to an NHS Clinical Entrepreneur place.

Stack: customised MediaWiki, PHP, Apache, MySQL, Linux and Azure DevOps.

Sync · Founder & Full-Stack Engineer

Since 2025

Built and operate a live product that coordinates calendars, identifies genuine group availability and books venues. Next.js 15, React 19, TypeScript, Prisma and Postgres; release automation, automated backups and migration checks.

CLINICAL PRODUCT DELIVERY

Cambridge Clinical Trial Unit · Full-Stack Mobile Developer

Built mobile data-capture apps for three live COVID-19 trials during the first wave. Xamarin, iOS and Android.

Resident Doctor · Chelsea & Westminster Hospital

Frontline acute medicine, ED and geriatrics since 2025: direct understanding of the friction, risk and incentives in everyday clinical work.

Arete MedTech · Software Engineer

Shipped a COPD/asthma tracking app with design and hardware teams. Xamarin, Flutter, iOS and Android.

Mansfield Advisors · Technical Consultant

Data pipelines, text mining and modelling that support healthcare and pharma commercial decisions across multiple markets.

CLINICAL AI WORK

Prima Mente · Deep Learning Engineer

Since 2024

Build components of Pleiades, an epigenetic foundation-model programme with 90M to 7B parameters trained on 1.9T methylation-data tokens. Work spans models, evaluation and tooling.

Moorfields Eye Hospital / Cambridge Centre for AI in Medicine · Deep Learning Engineer

2021 to 2024

Built multimodal models from images, genetics and health records for clinical diagnostics. Work includes a retinal foundation model in *Nature* (2023), plus studies in *JAMA Psychiatry* and *Ophthalmology Science*.

Wellcome Sanger Institute & National University of Singapore · Computational Biology / Statistical Genetics

2020 to 2022

Built diagnostics and statistical-genetics pipelines on HPC, including work on a 44,000-person cohort, Nanopore and Illumina workflows, and open-source genetics tools.

TECHNICAL SKILLS

Product: TypeScript, JavaScript, React, Next.js, Python, SQL, Postgres, Prisma, REST, OAuth and deployment automation.

Mobile & data: Flutter, Xamarin, iOS, Android, R, MongoDB, web scraping and NLP.

AI: PyTorch, transformers, foundation models, multimodal and causal modelling, LLM tooling, GPU and HPC.

How I work: product ownership, rapid iteration, regulated workflows and reproducible systems.

SELECTED WORK

- **27 publications, 3 patents and 1,450+ citations.** Work across clinical AI, ophthalmology, genomics and diagnostics, including *Nature*, *JAMA Psychiatry*, *Clinical Chemistry* and *Scientific Reports*.
- **Recognition:** NHS Clinical Entrepreneur; MIT COVID-19 Challenge winner; Cambridge Engineering Project Prize for the top reinforcement-learning project.
- **Education:** University of Cambridge MB BChir, Medicine (2025); MA (Hons), Engineering, Information & Bioengineering (2022).

SELECTED SIDE PROJECTS

- **Agentic Todo.** An agent-native task board with intake, triage and a durable dispatch layer for execution and due diligence; escalates only irreducible decisions. *Node, TypeScript, SQLite, Plane API, REST, MCP and Restate*.
- **Cook.** A mobile recipe product with 500+ recipes and an LLM sous-chef. *React, Vite, Supabase, Anthropic SDK, Capacitor*.
- **wardsim.** A ward-round trainer that simulates interruptions and assesses clinical reasoning. *Python and LLM tooling*.