Jacob Cable, Ph.D

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Skills

Languages	TypeScript/Node.js (6 years), Python (professional & personal projects), Java (2 professional projects), Dart, Go (maintenance), Rust (learning)		pytest, JUnit, E2E testing workflows
Technologies	Node.js, GCP, Firebase, Springboot, Docker, Cloudflare, Redis, Apache Beam, AWS, FastAPI	**Databases**	Firestore, BigQuery, Neon, Vector databases, Drizzle, Prisma, Postgres
Testing	Jest, Vitest, Playwright, Puppeteer, Cypress.js,	**Frontend**	React, Next.js, Astro.js, Remix.run, Tailwind, Tanstack Query
		Other	GraphQL, CI/CD, GitHub Actions, Google Colab

Experience

Freelance Work/Side Projects   **Aug 2024 – Present**
Software Engineer (Remote, Devon)

- Building CLI (written in Rust) to transform monolithic PRs into atomic commits
- Orchestrated and developed (Python) Generative AI/Computer Vision API for a medical use-case
- Building full-stack AI video processing app (Cloudflare Stream/Workers AI, Next.js, Neon)
- Building scalable data replication SaaS from Google Cloud Firestore to Google Cloud BigQuery

Invertase   **Aug 2021 – Present**
Staff Software Engineer (Jun 2025 – Present)
Senior Software Engineer (Sep 2024 – Jun 2025)
Software Engineer (Aug 2021 – Sep 2024)

(Remote, Devon/Manchester)

- Leading development on contracts with high profile clients, including Firebase Functions, Firebase Extensions, Firebase Genkit, and Google Cloud MemoryStore
- Leading maintenance of open source GitHub repositories totaling 8,400+ stars, including firebase-tools (4.1K), firebase-functions (1K), and firebase-extensions (900+)
- Consultant on the design of Firebase Genkit AI SDK (announced at Google I/O 2024) during pre-release
- Developed AI Firebase Extensions integrating Google's PaLM/Gemini APIs with Firebase services, featured in Google I/O 2023 keynote
- Performed maintenance on open source projects written in TypeScript, Python, Dart, Go, Java
- Built Apache Beam pipelines for data replication at scale
- Designed and implemented RAG solutions using major vector databases for enterprise clients
- Conducted R&D on fine-tuning LLMs for domain-specific applications
- Built and maintained full-stack applications and open source libraries using modern web technologies (Next.js, Astro.js, Remix.run, Tailwind, Tanstack Query, GraphQL, Drizzle/Prisma, tRPC/oRPC)
- Designed automated pipeline to track key metrics and SLA adherence for client reporting

Wakelet   **Feb 2021 – Jul 2021**
Frontend Software Engineer (Manchester)

- Delivered features and fixed bugs on a web application with millions of active users
- Led development of CI snapshot testing workflows using Cypress.js and GitHub actions
- Built SEO auditing CI using Google PageSpeed and Chrome UX Report APIs
- Developed features on backend microservices (various AWS services)

Institute of Mathematics, Polish Academy of Science   **Sep 2018 – Dec 2018**
Research Assistant (Warsaw)

- Lectured as part of a mini-course on complex contact geometry
- Ran a reading group for graduate students on algebraic geometry
- Performed mathematical research in the field of algebraic geometry

Education

University of Manchester   **2016 – 2020**
Ph.D in Pure Mathematics
Supervisor: Dr. Hendrik Suess. Thesis: Stability of varieties with a torus action

University of Oxford   **2012 – 2016**
Master of Mathematics (MMath), First Class Honours