

NICOLAS FORSTNER

nls.forstner@gmail.com | +44 7379 400253 | London, Marylebone | [GitHub](#) | [LinkedIn](#)

Built and shipped a production AI platform from zero as sole engineer — 80k LOC, enterprise clients, 1,000+ interviews conducted. MEng CS & AI from York (IET Prize, top of cohort). Spans agentic AI, full-stack product engineering, infrastructure, and client-facing work.

EXPERIENCE

2023 – **CO-FOUNDER & LEAD ENGINEER**

PRESENT [Langwith Research](#) (B2B SaaS / consultancy)

- Sole engineer: designed, built, and operated the entire platform (80k LOC). Conducted >1,000 semi-structured interviews for clients including Nesta, BIT, OVO Energy, and local government councils. Accepted into the Oxford University Innovation incubator.
- Architected a graph-based agentic interview engine with RAG, multi-agent orchestration, and automated red-teaming via synthetic participant personas. System sustained hundreds of concurrent interviews.
- 94.1% of interviewees rated interviews “Exceptional” or “Good”. Clients described the system as “truly impressive”, often replacing human-led interviews entirely.
- Co-led sales, client relationships, and research design. Advised on GDPR and institutional ethics compliance. Managed full project lifecycle from brief to data delivery.
- Stack: Django/Celery/PostgreSQL/RabbitMQ/Redis backend, React/TypeScript frontend with real-time sync via WebSockets. Self-managed infrastructure on Hetzner with Docker Swarm, Ansible, and GitHub Actions CI/CD.

SUMMER **INTERN – DATA SCIENCE & AI CONSULTING**

2020 *Atos*

- Built deep learning models for through-wall human detection using radio signals for the German armed forces (BWI). Cross-modal teacher-student architecture with custom 3D CNNs on GCP. Project expanded from pilot to 70+ people after stakeholder presentation.

SEPTEMBER **INTERN – DATA SCIENCE & AI CONSULTING**

2019 *Atos*

- ML models and tooling for pseudo-fault detection on a Siemens manufacturing line. Approach outperformed all alternatives, was selected for production, and spawned multiple follow-up engagements.

EDUCATION

2022 **MENG (HONS) COMPUTER SCIENCE WITH ARTIFICIAL INTELLIGENCE**

University of York (Russell Group)

- Recipient of the IET Prize for the most outstanding student of my year.
- First class honours with firsts in all four years of [the degree](#).
- Final project on object tracking in drone footage using fine-tuned YOLO and a custom tracking system enhanced with optical flow.

QUALIFICATIONS

LANGUAGES	Python, TypeScript, JavaScript
WEB & INFRA	Django, FastAPI, React, TanStack, Pydantic, SQLAlchemy, PostgreSQL, Docker, Ansible, Redis, Celery, RabbitMQ, GitHub Actions, Linux, Git, GitHub.
AI & ML	Agentic AI, RAG, custom model architectures and training loops, PyTorch, Jax.
SPOKEN	English (excellent), German (native)
BUSINESS	Sales, client management, research design, GDPR / ethics compliance
HOBBIES	Powerlifting S/B/D: 220/130/250 kg, >15 house plants

SELECTED PROJECTS

- SC2 A **multi-tenant B2B SaaS framework** based on patterns and learnings at Langwith Research. FastAPI + SQLAlchemy backend with row-level security via composable SQL-level policies (RBAC+ABAC), task queue via Redis or RabbitMQ, strict typing and extensive test suite. React frontend with TanStack Router/Query, event-driven cache invalidation via SSEs, OpenAPI-generated type-safe API client, and dual monorepo via Python UV and JS PNPM / Turborepo. [GitHub ↗](#).
- MINIGPT A from-scratch implementation of a **transformer language model** using Jax/Haiku. Multi-GPU training with automatic mixed precision and gradient checkpointing. Contemporary architectural improvements including rotary positional embeddings, pre-norm blocks, and SwiGLU activations. [GitHub ↗](#).
- KIGO A **diffusion model** for image generation, implemented entirely from scratch. DDIM sampling achieving strong results in only 16 steps, with a complete custom U-Net architecture. [GitHub ↗](#).