Zoltan Toth-Czifra

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EXPERIENCE

Independent ML work **Jun. 2024 – present**
Barcelona, Spain

- Self-funded study and experimentation across LLM post-training and reinforcement learning, vision-language model fine-tuning, multi-GPU training infrastructure, LLM evaluation and agent scaffolding, retrieval, and automated theorem proving.

Gleipnir Medical **Feb. 2021 – Jun. 2024**
Founder & CEO *Barcelona, Spain*

- I founded, financed, and led Gleipnir Medical (formerly Real Deal Milk). We won the Startup of the Year award in the Spanish region of Catalonia in 2022.
- My team of 5 biotechnology researchers was researching sustainable protein production through gene editing and amino acid restriction for cancer therapy. We filed three patents. We were founding members of a consortium with Abbott, Wageningen University, and others to research the safety of recombinant proteins.
- The company closed after three years due to difficulties with fundraising.

Under Lucky Stars **Dec. 2016 – Feb. 2022**
Founder & CEO *Barcelona, Spain*

- I founded and built Under Lucky Stars, commercializing products based on NASA-astronomer audited astronomical projections.
- I developed the astronomical mapping software and a custom e-commerce platform. I led a team of 14 people at its peak.
- The company generated over $25 million in revenue and $2.8 million in earnings (EBIT) over 6 years. Acquired in 2022.

Trifecta Retail Ventures **Sep. 2013 – Jan. 2018**
Chief Product Officer *Helsinki, Finland*

- I was responsible for recruiting and managing engineering talent. We built web and mobile applications.
- Later, I took a product development leadership role as Chief Product Officer.

Softonic **Oct. 2009 – Aug. 2013**
Architecture Engineer *Barcelona, Spain*

- I worked with a software development department of 80 people, establishing coding standards, making architectural decisions, and building a web application serving over 1 billion monthly pageviews.

TECHNICAL SKILLS

- **Machine learning:** PyTorch, HuggingFace Transformers, TRL, PEFT/QLoRA, vLLM, DeepSpeed, TransformerLens, devinterp
- **LLM systems:** Inspect AI, agent scaffolds and tool use, MCP, mechanistic interpretability (sparse autoencoders, activation steering, logit lens, weight editing), controlled eval design, reasoning benchmarks
- **Languages:** Python (primary, 15+ years), TypeScript/JavaScript, SQL, PHP
- **Infrastructure:** Linux, Docker, AWS/GCP, Vast.ai

EDUCATION

University of Oxford **Oct. 2021 – May 2025**
MSc in Software Engineering

- Graduated with Distinction.
- My dissertation on transformer-based image-to-code generation was published as arXiv:2509.05394. I released the associated datasets and model checkpoints on HuggingFace.

University of London, Goldsmiths' College **Nov. 2017 – Aug. 2020**
BSc in Computing and Information Systems

- Graduated with First Class Honours.
- My final project was about a privacy-improving service architecture.

OTHERS

- **Harvard Summer School:** Linear Algebra and Differential Equations, Summer 2024, grade A
- **Publication:** Reverse Browser: Vector-Image-to-Code Generator, arXiv:2509.05394 (sole author)
- **Patent:** Recombinant proteins and their use in cancer therapy WO2025088037 (co-inventor)
- **GPU-grant:** I founded a mini-grant to support students and researchers with GPU resources.