Emanuel Geromin



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PROFILE

Versatile software engineer committed to delivering high-impact, maintainable software. I favour incremental approaches, frequent de-risking and data driven decision making.

Looking for companies envisioning a future in which technology serves individuals, communities and nature as a whole, there is no waste, and humans find deep meaning and connection in the work they do.

TECH STACK

Python, Pytorch, Huggingface, Tensorflow, Triton, Scipy, Scikit-learn, Numpy, Pandas, Dask, OpenCV, PIL, Django, Kubernetes, Terraform on AWS, Serverless, Postgres, Gitlab CI, Argo.

PERSONAL INFORMATION

Citizenship: Italian Languages: English, German, Italian (all fluent)

EDUCATION

UNIVERSITY OF CAMBRIDGE, CHRIST'S COLLEGE. Cambridge, UK. BA (Hons) Mathematics, Class 2.1. 2009–2012

Pure mathematics, probability, statistics, applied mathematics.

UNIVERSITY OF WARWICK. Coventry, UK. MSc Mathematics. 2012–2013

- Number theory, algebraic geometry, analysis and algebra.
- \diamond Dissertation: Spectral Theory for $SL_2(\mathbb{Z})\backslash\mathbb{H}$.

RECURSE CENTER. New York, NY, USA. April-June 2018

⋄ Self-directed programming retreat. Projects in deep learning and reinforcement learning.

EXPERIENCE

ONFIDO LTD. Senior Software Engineer and Tech Lead. *London, UK.* March 2019 – Current (5 years)

AI solution to extract structured text and identify fraud in passports and other official ID documents.

- ♦ Tech lead for a team of 6 engineers, responsible for the delivery of a document extraction solution at scale.
- ♦ Implemented systems using state-of-the-art AI: Donut, LoRA, CLIP.
- ♦ Scaled fraud detection systems by 1000X, measured by number of ML models.
- \diamond Built the company's main orchestration system, a complex DAG of 50 ML-based services.
- Increased throughput of batch training pipelines by 50X.

NEXT42 Sp.z.o.o. Software Engineer. *Kraków, Poland.* November 2016 - March 2018 (1.5 years)

ML based solutions at a software house.

- \diamond Built AI-based web crawlers to extract information from semi-structured web pages using Python and spaCy.
- Distributed scraping of 10M webpages, bypassing IP-based throttling.
- ♦ Launched a "travel visa application tool" website from zero in 1.5 months, generating \$4K revenue in the first 2 weeks of usage.

3D INDUSTRIES LTD. Software Engineer. London, UK. March 2014 - October 2016 (2.5 years)

Startup building "Google for 3D". Built a multimodal search engine for 3D CAD models.

- ⋄ Created a search engine indexing 300K 3D CAD models.
- ♦ Multi-modal input: 3D, images, 3D scans, text. Early days deep learning with Caffe.
- ⋄ Collaborated with leading academics from Stanford University.

SIDE PROJECTS

- Image captioning pipeline using deep learning.
- ♦ Reinforcement Learning: Tic-Tac-Toe AI and a RaceTrack learner, implemented in Julia and Elm.
- Wellington: a blogging engine written in Rust.

HOBBIES

- ♦ *Permaculture and circular farming:* 6-week volunteering on a permaculture farm in Feldbach, Switzerland, summer 2023.
- ⋄ *Outdoors*: Keen runner and outdoor mountain sports enthusiast. Enjoy hiking, trekking and ski-touring.
- ♦ *Classical music:* Amateur classical musician. Sung in London-based choir The Cantus Ensemble. DipABRSM diploma in violin performance.