Emanuel GEROMIN

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PROFILE

Versatile ML 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.
◇ 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. Staff Software Engineer.
Previously: Senior Software Engineer, Software Engineer II
London, UK.   March 2019 – Current (5.5 years)
AI solution to extract structured information 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.
◇ 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.
◇ 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

◇ *Outdoors:* Running, hiking, trekking and ski-touring.
◇ *Classical music:* Tenor in choir, DipABRSM violin performance.
◇ *Permaculture and circular farming:* 6 weeks volunteering, summer 2023.