

Emanuel GEROMIN



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PROFILE

I am a versatile software engineer committed to delivering high-impact, maintainable software. I favour incremental approaches, frequent de-risking and data driven decision making. I am looking to work for companies striving to build 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, Tensorflow, Scipy, Scikit-learn, Numpy, Pandas, Dask, OpenCV, PIL), Django, Kubernetes, Terraform on AWS including serverless, Postgres, Gitlab CI.

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. Senior Software Engineer. London, UK. March 2019 – Current (5 years)

Core member of the "Document Visual Fraud" team. Delivered backend ML + CV systems to identify fraud in passports, driving licences and other government IDs.

- ◊ Designed and implemented fraud detection systems serving thousands of machine learning models that are continuously updated.
- ◊ Created the company's foundational orchestration system. Distributes requests between 50 ML models for a combined 20 minutes of CPU time while keeping responses below 5 seconds.
- ◊ Increased throughput of compute intensive distributed training and evaluation batch pipelines by a factor of 50X.
- ◊ Wrote front-end tools for visualisation, data exploration, debugging, explainability and support tasks.
- ◊ Owned the delivery of 6-month long projects employing 3 developers full time.

NEXT42 SP.Z.O.O. Software Engineer. Kraków, Poland. November 2016 - March 2018 (1.5 years)

Miscellaneous ML based solutions at a software house.

- ◊ Built AI-based web crawlers to extract company information from semi-structured web pages using Python and spaCy. Distributed and fast, scraping 10M webpages while 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)

Main developer at a startup building "Google for 3D". Built a multimodal search engine for 3D CAD models.

- ◊ Created systems to search repositories of 3D models containing hundreds of thousands of CAD models using CV and ML. Multiple query modes (3D, images, 3D scans, text). Early days deep learning with Caffe.
- ◊ Collaborated with leading academics from the U.S. (Stanford) and Europe (Lille).

HOBBIES

Permaculture and circular farming: Volunteered for 6 weeks on a permaculture farm in Feldbach, Switzerland in summer 2023.

Outdoors: Keen runner and outdoor mountain sports enthusiast.

Classical music: Amateur classical musician - sung in London-based choir The Cantus Ensemble. Hold a DipABRSM diploma in violin performance and play the piano.