

# Emanuel GEROMIN



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github.com/egeromin

## 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 (6 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.ZO.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.