Tom Pollak

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EXPERIENCE

Cisco Meraki   June 2023 – Present
ML Software Engineer – Camera Intelligence Team   *Remote, UK*

- Independently researched, designed, and implemented a novel approach for solving problems in person similarity search, attribute-based search, and tracking with a single model inference *without* using facial recognition.
- Lead a team of 7 engineers in the SF Hackweek 2023 to integrate the project into the frontend dashboard.
- Project was also demoed at Cisco Live 2024.
- Developed & integrated 10K LOC C++ library into existing codebase, with full testing suite & benchmarks in GTest.
- Ensured edge device inference was equivalent to the trained model with minimal quantization error.
- Collected and curated a high-quality dataset of >50K images. Worked with labellers and finetuned a number of models (Moondream and others) to eval the quality of the dataset.
- Finetuned a CLIP text encoder to align NLP queries in latent space.
- Originally hired as a summer intern in 2022, rejoined full-time in 2023. Intern Reference [Related project]

EDUCATION

University of York   June 2023
BEng. Computer Science – First Class Honours

Lady Manners School   2020
A-Level – Further Maths (A), Maths (A), Computer Science (A), Physics (A)

PROJECTS

Tinyai   January 2024 – March 2024
https://github.com/tom-pollak/tinyai

- Toy custom deep learning framework on top of PyTorch for learning.
- Initially built alongside fast.ai part 2 SD from fundamentals.

NLP Image Retrieval with CLIP   September 2022 – June 2023
https://tom-pollak.github.io/clip-index

- University dissertation project – graded 80%.

Automated Horse Betting Software   December 2020 – July 2021
https://github.com/tom-pollak/each-way-matcher

- Discovers undervalued horses in each-way betting by exploiting bookmaker "place" odds.
- Uses an adapted Kelly Criterion strategy to calculate the optimal stake.
- Uses Python, Pandas and Selenium to scrape the race data, interacts with Betfair API to place bets.

Poker Web Application   April 2019 – July 2020
https://github.com/tom-pollak/web-poker

- Free live poker web app, users can create accounts and tables, play poker, and chat with other players.
- Python / Django, Postgres, Django Channels / Redis for real-time communication. Deployed with Docker & Heroku.

SANS Institute   August 2020
FOR500 Windows Forensic Analysis
https://www.sans.org/cyber-security-courses/windows-forensic-analysis

- Sponsored by HM government for reaching the final Elite stage of the Cyber Discovery programme.

SKILLS

Languages	Python, C++, Cuda C.
ML	PyTorch, Numpy, Pandas, Matplotlib, HF libs, scikit-learn, fast.ai.
Tools	Linux, VSCode, Neovim, Docker, Git, SQLite, LaTeX.