GUY TORBET

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EDUCATION

University of Edinburgh   Edinburgh, UK
Bachelor of Science in Artificial Intelligence & Computer Science   *Sept 2021 – July 2025*
- Expected First Class Honors (87%).
- Notable Courses: Data Science, Machine Learning Systems, Natural Language Processing, Operating Systems, Algorithms and Data Structures, Computational Logic, Mobile Robotics, System Design, Compiling Techniques, Computer Systems, OOP, Computer Security, Discrete Mathematics, Linear Algebra, Probability.
- Won the SkyScanner Most Sustainable Project Award for my Systems Design Project.

EXPERIENCE

Software Engineer   Apr 2021 – Feb 2024
HackerNoon   *Remote*
- Lead the development of a full migration to SvelteKit & Postgres. Resulted in **web vitals gains of over 20%** and **hosting cost reductions of 40%**.
- Designed and implemented a scalable hosting infrastructure for internal ML models using Docker, Kubernetes and Google Cloud which powers the AI features in the editor.
- Developed a distributed internal analytics system to accurately measure key KPIs while maintaining user privacy.
- Improved the editor experience by implementing a variety of features including a custom markdown parser, real-time collaboration and a custom image editor.
- Created a pipeline to **mint 30,000+ NFT awards** for top authors using a custom smart contract on Polygon.
- Built a robust comment and notification system, including real-time updates, admin moderation panel and comment threading.

Software Engineer Intern   May 2020 – July 2020
Alpha Data   *Edinburgh, UK*
- Collaborated with the Edinburgh team to enhance FPGA testing processes in VHDL and Verilog.
- Conducted end-to-end FPGA design testing, streamlining manufacturing workflows and **reducing error rates by 15%.**

PROJECTS

PintFind | Pub Finder App | *SvelteKit, JavaScript, SQL, Mapbox*
- Developed a full-stack web application using SvelteKit, MapBox & Turso to help people find the best pubs and bars based on community reviews.
- It Achieved over 500 active users and over 300 reviews.
- Successfully negotiated an acquisition deal with a local competitor 6 months after launch.

Blunder | Cheat Detector for Online Chess | *Python, PyTorch, C++, Flask*
- Designed and implemented a variety of deep learning models to detect the use of engines in online chess games.
- Generated a novel dataset using Maia & Stockfish to represent selective cheating.
- My model reached an accuracy of 92%, surpassing the Stanford PhD benchmark by 14%.

AutoTab | AI Guitar Tab Transcriber | *Python, PyTorch, ScraPy*
- Built a deep learning model to generate guitar tabs from audio input using a custom dataset of 10,000+ songs.
- Developed a transformer model with Mel-Spectogram encoding to learn the relationship between audio and tablature.
- Achieved an accuracy of 85% against a held-out test set, outperforming the state-of-the-art by 10%.

Synapse | Educational AutoGrad Engine | *Python, NumPy, Rust, Py03*
- Developed a custom autograd engine in Python and Rust to learn the fundamentals of backpropagation.
- Implemented a variety of optimisers including SGD, Adam and RMSProp to demonstrate the differences in convergence speed.
- Used the engine to train a simple neural network on the MNIST dataset to achieve 95% accuracy.

SKILLS

Languages: Python, Java, SQL, C, C++, HTML/CSS/JavaScript, Go, Rust, VHDL.
Libraries: Pandas, NumPy, JAX, Matplotlib, PyTorch, Scikit, OpenCV, React, SvelteKit.
Developer Tools: Git, Google Cloud Platform (GCP), Amazon Web Services (AWS), Docker, Kubernetes.
Interests: Deep Learning, Finance, Chess, Poker, Guitar, Skiing.