Tommo Chung

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Profile

I'm a recent Informatics graduate with a strong foundation in AI, machine learning, and software engineering. Experienced in Python, LLM fine-tuning, and building interpretable AI systems. I'm passionate about advancing trustworthy AI and eager to contribute to cutting-edge research in neuro-symbolic approaches. I work well in a team, am committed to learning quickly and upholding high standards of quality in both code and research documentation.

Technical Skills

- **Programming:** Python, JavaScript (React), TypeScript, Haskell, C/C++
- **AI/ML Tools:** TensorFlow, PyTorch, LLM fine-tuning (LLaMa, Qwen, Gemini), computational pipelines, NLP frameworks, model evaluation
- **Data Science:** Pandas, NumPy, data analysis, data visualization, benchmark evaluation
- **Version Control:** Git, GitHub Actions
- **Cloud:** Familiarity with fundamentals of cloud computing; keen to pursue Azure certification
- **Research:** Technical report writing, experimental design, model interpretability analysis
- **Other:** UI/UX, hardware integration, public sector data

Experience & Projects

AI & Data Projects

- **Masters project - graphically editable music transformations**
  - Implemented advanced signal processing and ML compatible mathematical transforms

(NSGT) to demonstrate a novel music editing workflow with improved interpretability of the transformation process.

> Working with tensor computation in PyTorch for signal processing, focusing on making complex mathematical operations more transparent and controllable.

- **High performance metaheuristic algorithms using TensorFlow**
  - > Used TensorFlow to implement metaheuristic algorithms (particle swarm optimiser, genetic algorithm) leveraging CUDA, with structured internal representations for algorithm state tracking.
- Edinburgh cycle share scheme **- data analysis and presentation**
  - > Analysed and visualised public sector transport data using Python and data science packages, providing actionable insights during the COVID-19 pandemic.
  - > **Developed comprehensive evaluation metrics and benchmarks** for assessing data quality and model predictions.
- **Inkwell PR - GPT based press release generator**
  - > Contributed to the development of a GPT based press release generator, refining the core service and integrating payment/subscription.
  - > **Focused on improving model interpretability and reasoning consistency** through structured prompt engineering and output validation.
- **SendEvent app - NLP assisted events and invitations**
  - > Used NLP tools to turn plain English phrases into structured, shareable iCal files.
  - > **Experimented with fine-tuning LLaMa, Qwen and Gemini models** to perform advanced phrase NLU: "every second friday of june except 16th", evaluating model performance across multiple benchmarks and analyzing reasoning transparency.

Web & Software Projects

- Binary Abacus **- Interactive binary learning tool for kids**
  - > Built a modern, interactive web application using React to help users learn about binary numbers, encoding systems, and bitwise operations.
  - > Implemented features including multiple rows for simultaneous values, configurable bit columns, and various encoding options (unsigned/signed binary, IEEE 754, ASCII).
  - > Created an intuitive UI with visual beads that change color based on position, keyboard shortcuts, and sound feedback.
  - > Designed with responsive layout and multiple interaction modes (keyboard/mouse) for accessibility.
- Workout Mate **- Gymnastics strength and conditioning app**
  - > Developed a web app for the Edinburgh University Gymnastics club's strength and conditioning programme, using React, Astro, and GitHub Actions.
  - > Collaborated with club members to refine the app and deliver a user-focused solution.

Hardware & Embedded Projects

- **Tenuto; Robot piano tutor**
  - Developed hardware and control software for a robotic piano tutor concept, interfacing with Bluetooth LE MIDI and utilising wireless chips, microcontrollers, and MOSFETs to drive a solenoid array, with variable key velocity using high-frequency control signals.
  - Key player in a large team; product demo rated best among 23 teams by technology and business experts.
- **Wireless measurement device for understanding impact forces on gymnasts**
  - Created a wearable harness with inertial measurement hardware, collected data over Bluetooth using Python.
  - Performed analysis and visualisation to gain insights into physical preparation.
- PlayerData - Full SoC emulation for driver code testing
  - Developed virtual driver testing for sports wearables using C/C++ on ARM chips.
  - Learnt about realtime and low power systems.
- **Scottish Baccalaureate in STEM - wireless communication using visible light**
  - Highest Baccalaureate grade for the Angus district (2019).
  - Self-taught in embedded programming, electronics, signal processing and telecommunications; developed a relay chat proof of concept as an independently organised project.

Education

Edinburgh University - Informatics (MInf) (2019-2025)

- **80% average marks in quality & readability of code and documentation** - demonstrating strong technical writing and documentation skills essential for research reporting.
- **Python data science packages** (Introduction to Data Science) - extensive experience with evaluation frameworks and benchmark analysis.
- **Deploying a REST service with Azure** (Applied Cloud Programming) - practical experience with scalable model deployment.
- **Machine learning on Google Colab** (Machine Learning Practical) - hands-on experience with model training, fine-tuning, and performance evaluation.
- **Advanced coursework in AI reasoning and symbolic computation** - strong theoretical foundation in both neural and symbolic approaches to AI.

Arbroath High School (2013-2019)

> Proxime Accessit 2018.

Employment

Inkwell PR - Full stack developer (Dec 2023 - Aug 2024)

PlayerData - Firmware engineering intern (Jun - Sep 2023)

Other Experience

Costa Coffee (2022 - 2023)	Artisan Gelato (2022)	Nairn's Oatcakes (2021)	Grant Westfield (2021)	Wetherspoons (2018-2019)

Voluntary & Non-technical Roles

Edinburgh University Gymnastics Club

Social and fundraising coordinator

> Promoted events on social media and in person, increasing social attendance from 5 to 20+ people.
> Planned and organised social activities and fundraising initiatives, collaborating with other sports clubs.
> Worked as a team with committee, coaches, and club members.

Strength and conditioning coach

> Organising and leading a training programme, collaborating with athletes and coaches to achieve performance goals.