Caleb Hua En Tham

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EDUCATION

University of Warwick: MEng (Hons) Computer Science – 3rd (Penultimate) Year   *(Sep 2020 – Jun 2024)*
- 2nd year grade: First (85.1%)
- 1st year grade: First (84.1%)
- 3rd Year Project Title: JPEG Compression Detection and Restoration

Bournemouth School   *(Sep 2013 – Jun 2020)*
- A-Levels: A*A*A*A* in Computer Science, Further Mathematics, Mathematics, and Physics
- GCSEs: A^A*9999999887 (Equivalent to 11 x A* and 1 x A)
- Senior Prefect: Head of mentoring – Co-ordinated and conducted the mentoring of a fifth of all students

EXPERIENCE

Progressive Equity Research – Software Developer   *(Jun 2022 – Oct 2022)*
- Entrusted to develop a tool that provides analysts relevant LSE news summaries in a timely manner
- Implemented a Python web scraper that obtains news and a text parser that performs extraction-based summarisation
- Employed the use of a thread pool to address a networking bottleneck and increase performance by ~90%
- Effectively communicated with the Managing Director to inform a tailored solution during development and testing

Lockdown Learning Tutoring – Co-founder and Web Developer   *(Jun 2020 – 2021)*
- Co-founded an organisation to advertise online tutors during Covid. Established teamwork and entrepreneurial skills
- Collaborated with schools to advertise through leaflets, successfully finding students for tutors listed on the website
- Under time pressure (within two days), learned essential web technologies, including HTML, CSS, and JavaScript (Node.js) to design, develop, and deploy the organisation's website (no longer maintained): lock-learn.co.uk

Tutor (A-Level/GCSE Mathematics and Physics)   *(Apr 2020 – Sep 2020)*
- Ensured student understanding by formulating ways to explain complex concepts in a clear and intuitive manner
- Encouraged student enthusiasm by devising engaging ways to teach and providing constructive feedback, which helped enhance my interpersonal and communication skills

PROJECTS

2nd Year Group Project (Sponsored by Deutsche Bank):
- Following agile principles (Scrum), in a team of 7, developed a full stack web application for a workplace mentorship scheme, using Vue.JS, Flask, SQLAlchemy (with PostgreSQL) – all hosted with Docker containers
- Effectively led and managed the development of the front-end components, which Deutsche Bank formally praised
- This resulted in Deutsche Bank ranking our solution in the top 5 of all software engineering group projects (out of 46)

University of Sheffield Headstart Course
- Acted as Project Manager in a time-constrained group project, programming Lego EV3 Robots in Java
- Led the team to achieve the 1st place prize, demonstrating excellent leadership, teamwork, and problem-solving skills

Multchess
- Implemented an online multiplayer chess application using Node.js and Socket.IO. Website: multchess.com
- Improved web dev skills to make a responsive and reliable web application with full duplex and low-latency capabilities

Deep Learning Handwriting OCR
- Using TensorFlow 2 for Python, created a CNN to classify handwritten alphanumeric characters (trained on EMNIST)
- To prevent overfitting, used dropout layers, batch normalization, and regularization. Used a validation set and wrote custom callbacks to analyse the model between epochs (e.g., by graphing prediction class frequency using Matplotlib)

TECHNICAL SKILLS

- Programming Languages: **Proficient** – Python, Java, JavaScript, VB.NET. **Intermediate** – C, PHP, MATLAB
- Libraries: NumPy, Pandas, Matplotlib, TensorFlow 2, Scikit-learn, Flask, Node.js, Vue.JS, Socket.IO
- Technologies: SQL (PostgreSQL), HTML, CSS (Bootstrap), Docker, Git, Linux, MacOS, Windows

PERSONAL ACTIVITIES

- Warwick Jazz Society: Head of Marketing – Manage, plan, and advertise all society events
- Express creative side through composing music (Logic Pro), photography, and graphic design (Adobe Creative Suite)
- Maintain fitness by powerlifting and playing tennis 6 times a week