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 – Sep 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, establishing teamwork and entrepreneurial skills
- Collaborated with schools to advertise through leaflets, successfully finding students for tutors listed on the website
- Under time pressure, learned essential web technologies, including HTML, CSS, and JavaScript (Node.js) to develop 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 by providing constructive feedback, which helped enhance my people management 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

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 Senior Exec: 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