Vincent Pham

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SUMMARY

- Computer Engineer student from UNSW with high distinction average.
- Interest in developing full stack projects and AI applications.
- Proven experience in research and development of AI applications accepted at the Sixth IEEE international conference on Image Processing Applications and Systems which won the best session paper award for the workshop on AI methods of video analysis for human behaviour recognition.

EDUCATION

Bachelor of Engineering (Computer Engineering) Present (Exp. Graduation Winter 2025)
University of New South Wales

- WAM: High Distinction.

EXPERIENCE

Casual Academic *February* 2022 – April 2022
University of New South Wales

- Created bi-weekly lecture summaries for 624 students in the Software Engineering Fundamentals course in collaboration with the Equitable Learning Services team at UNSW.
- Documented topics such as RESTful API, Testing Fundamentals, Agile, Python, Software Development Lifecycle, CI/CD.

PROJECTS

Occlusion Aware Engagement Detection
https://github.com/teddyld/occlusion-aware-engagement-detection | Python | PyTorch | Computer Vision
Occlusion-aware Computer Vision methods for facial expression and engagement detection.

- Demonstrated a 5.12% accuracy improvement on a challenging "in-the-wild" facial-expression recognition dataset by creating occlusion-aware data augmentation methods. Accepted at the Sixth IEEE International conference.
- Delivered technical Thesis reports and presentations, alongside liaising with a supervisor in weekly standups.

Pomodoro and Trello Web-application
https://github.com/teddyld/doro | https://doro-flax.vercel.app/ | PostgreSQL | React.js | Node.js | Express.js
A pomodoro web-application integrated with a Trello board for project and time management

- Created a web-application hosted on Vercel using React.js, NextUI components, Tailwind for CSS styling and Zustand to manage global state that allows users to start Pomodoro sessions and manage tasks in a Trello board.
- Backend uses Node.js with Express.js and a PostgreSQL database using RESTful API. Unit tests for components implemented with Jest. User authorization implemented using JWT and OAuth 2.0, allowing Google sign-in.

Hardware Accelerated kNN algorithm
https://github.com/teddyld/hardware-accelerated-knn | C | C++ | VHDL
Worked with a team of 4 to accelerate the k-nearest neighbours algorithm on hardware.

- Achieved a 100x speed-up in execution time by developing an optimized kNN algorithm on handwriting classification within a 4-week deadline.
- Integrated test benches in C to stream testing bytes to hardware by implementing software to hardware communication layer.

Image Style Transfer
https://github.com/teddyld/image-style-transfer | Python | PyTorch | Computer Vision
Worked with a team of 5 to compare traditional CNNs and Generative Networks for Image Style Transfer.

- Provided technical support to team members unfamiliar with PyTorch to implement network training and evaluation for four open-source IST architectures, achieving 100% of available course marks in a three-week deadline.

SKILLS

- Python | C | Java | Node.js | Express.js | Flask | PyTorch | Unit Testing | PostgreSQL.
- JavaScript | TypeScript | HTML | CSS | React.js | Jest | Axios | Zustand | OAuth 2.0.
- Git | Agile | VHDL | MIPs Assembly.