

# HO SHU HAN

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Los Angeles/Singapore

## EDUCATION

### University of California, Los Angeles (UCLA)

Master of Engineering, Data Science

Los Angeles, CA

Expected Sep 2026

### University College London (UCL)

BSc Computer Science (First Class Honours)

London, United Kingdom

Sep 2025

Relevant courses: Data Structures and Algorithms, Discrete Math, Linear Algebra, Theory of Computation,  
Computer Architecture and Concurrency, Logic, Software Engineering, Compilers, Computer Graphics,  
Machine Learning for Visual Computing

## SKILLS & TOOLS

### Programming Languages

C, Java, Python, JavaScript, AppScript, Swift, React, HTML, CSS, Haskell, GLSL

### Frameworks / Libraries

PyTorch, TensorFlow, Scikit-learn, Pandas, NumPy, Matplotlib

### Tools & Platforms

Git, Docker, Kubernetes, AWS, Colab, Jupyter, Runpod, Figma, IBM SPSS

## WORK EXPERIENCE

### Centre for Strategic Information Technologies (CSIT)

Singapore

Agentic AI Intern | *NutJS, Electron, LangChain, Crawl4AI, ChromaDB*

Jun 2025 – Aug 2025

- Built static/dynamic RAG for Computer Use Agent (CUA) UI-TARS agent framework.
- Re-engineered prompts for CUA to increase agent contextual accuracy.
- Conducted inference on o4-mini, Sonnet-4, UI-TARS-1.5-7b, Qwen2.5-VL-72b-Instruct.

### University College London (UCL)

London, United Kingdom

NLP Research Intern | *Transformers, Wandb, Pandas, PyTorch, Plotly, Tensorboard*

Sep 2024 – Jun 2025

- Thesis Topic: Evaluation of Finetuned LLMs for Abstract Meaning Representation Parsing.
- Mentored by Anthony Hunter, Head of UCL Intelligent Systems Group.
- Finetuned 4 Open-Source LLMs (LLaMA-3.2, Phi-3.5, DeepSeek-R1-LLaMA-Distilled, Gemma-2) using LDC2020T02 dataset and achieved SMATCH F1: 0.804, on par with SOTA parsers like APT+ Silver (IBM).
- Engineered inference pipeline, analyzing structural and semantic performance of each LLM for AMR Parsing.
- Conducted further inference on 4 models using Silver Maximum Bayes SMATCH Ensemble (MBSE) Silver data.

### DSTA Information PC

Singapore

Machine Learning Intern | *Scikit-learn, TorchVision, Peft, BitsandBytes, Datasets, TQDM*

Jun 2024 – Aug 2024

- Built image generation pipeline using text-to-image models such as Stable Diffusion 3 and FLUX, as well as Florence-2 Vision Language Models (VLMs) that beat SOTA detectors (e.g. Hive).
- Finetuned VLMs such as Idefics2-8B for image modification classification.

### University College London (UCL) MotionInput

London, United Kingdom

Computer Vision Intern | *Mediapipe, Matplotlib, PyAutoGUI, Nuitka, OpenCV*

Sep 2024 – Jun 2025

- Member of Migration team in UCL MotionInput, a Touchless Computing startup promoting AI for Accessibility.
- Developed MotionInput API to enable cross-platform compatibility (UNIX, Windows) for python package.
- Led the integration of MotionInput with various simple online games (e.g. poki dinorun, poki traffic rush).
- Designed and developed UI/UX for [Portfolio project website](#).

### DSTA BrainHack Hackathon

Singapore

Finalist | *PyTorch, Detectron2, CV2, Numpy, Tensorboard*

Mar 2022 – May 2022

- Trained CentreNet for image classification task. Pitted robots to complete search and rescue missions possible using the model developed.

### DSTA C3 Development PC

Singapore

Data Science Intern | *IBM SPSS*

Oct 2018 – Dec 2018

- Deployed pipeline consisting GLM, CART and Clustering models to predict the Estimated Time of Arrival (ETA) of incoming port vessels.

## PUBLICATION

S. H. Ho, "Evaluation of Finetuned LLMs in AMR Parsing," arXiv.org, 2025. <https://arxiv.org/abs/2508.05028>

## SCHOLARSHIP

### Defence Science and Technology Agency Scholarship

Singapore

Full-ride Undergraduate and Postgraduate Scholar

Sep 2022 – Sep 2026

- Awarded to selected top Singaporean students with strong technical abilities and interest in Science and Engineering.



## PROJECTS

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### UNIX Shell Replica

Mar 2024 – May 2024

UCL Project | [GitHub](#) | *Pygments, Prompt Toolkit, Hypothesis*

- Developed UNIX shell replica with advanced functionality (e.g. command prediction, syntax highlighting).
- Wrote example-based and property-based unit tests to ensure accuracy of UNIX shell.

### Telegram Duty Roster Bot

Sep 2023 – Oct 2023

Individual Passion Project | [Google Sheets](#) | *BotFather, AppScript*

- Developed a telegram bot to send a reminder message for duty roster to committee members every Friday.
- Enhanced user experience by integrating bot with Google Sheets for ease of input.

### Tetris Auto Player

Mar 2022 – May 2022

UCL Project | [Github](#) | *Pygame, Tkinter, Adversary*

- Developed algorithm to optimize Tetris gameplay, increasing game score by 3x. This was done by selecting optimum block landing positions based on current and look-ahead blocks.

## AWARDS

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### SAF Engineer Training Institute NSF Of The Year

Singapore

Cadet Trainer

Sep 2020 – Nov 2021

- Responsible for training and welfare of over 500 cadets spanning across 5 batches.

### Edusave Award for Achievement, Good Leadership and Service (EAGLES)

Singapore

Student

Dec 2019

- Awarded to up to 10% of students from each school who have demonstrated leadership qualities, service to community and schools, excellence in non-academic activities, and good conduct.

### Edusave Good Progress Award

Singapore

Student

Dec 2017

- To recognise students who are within the top 10% of their level and course in terms of improvement in their academic performance and have demonstrated good conduct.

### SPF-NPCC Award

Singapore

Student

Mar 2017

- This pinnacle national award is given to graduating cadets who have shown outstanding leadership performance and contributions to the corps during his term of service. Each year, only the top few percent of all graduating cadets in NPCC(Singapore) are awarded this prestigious badge.

### Edusave Scholarship

Singapore

Student

Dec 2013

- Students who are within the top 10% of their school's level and course in terms of academic performance and have demonstrated good conduct.