

C H E A H Y E O K T A T T

Software Engineer

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EDUCATION

09/2018 - 07/2022

*The Hong Kong Polytechnic University, Bachelor of Electronic and Information Engineering
Information Technology and Multimedia Stream, 2nd Class Upper Division*

- **EIE Joint Entry Scholarship**, including tuition fee and stipend worth 640,000 HKD (82,000 USD)
- **Best Semester GPA Award** for both semesters in Year 4, CGPA 3.23 | Year 4 GPA 3.86
- Relevant Technical Subjects: Deep Neural Networks, Computer Vision and Pattern Recognition, Multimodal Human Computer Interaction, Data and Communications, Database Systems.

IBM Data Engineering Professional Certificate

PROFESSIONAL EXPERIENCE

Hong Kong Centre for Logistic Robotics • Engineer

09/2022 - Present

- Develop software with C++ and Python in Linux, maintain and deploy software with git and Docker.
- Integrate and test SOTA algorithms from our research teams onto production-ready platforms, particularly deep learning for pose estimation, cluttered object segmentation and task planning (Python, Pytorch, C++, OpenCV and workflow design such as UML).

The Hong Kong Polytechnic University • Research Assistant

05/2021 - 07/2022

- Develop and maintain ETL pipeline in MATLAB to transform, clean, segment and store and selectively load over 5TB high dimensional dataset sports data.
- Develop machine learning and deep learning frameworks for muscle fatigue detection in Python.

Mini-circuits • Intern

12/2020 - 02/2021

Intern in the MNC's R&D lab on data-driven radio frequency human and object identification [[Link](#)].

- Conduct experiments, hypothesize and optimize TI CC1120 chip's real-time transfer rate by 10x.
- Develop GUI application for real-time computer-MCU communication and data collection (Java).

Affinex • Intern

02/2020 - 07/2020

- Develop ESP32 and Firebase based IoT products and set up IoT infrastructure.
- Design and coordinate the *100-Day Young Engineer's Makerthon* for over 85 participants [[Link](#)]

PUBLICATIONS

- Approach for evaluating breast motion for sports bra design – AHFE Conference 2024 [[Link](#)]
- Artificial Intelligence Assisted Personal Training System, Personal Training Device and Control Device [[US Patent](#)]
- Prediction of Muscle Fatigue During Dynamic Exercises based on Surface Electromyography Signals Using Gaussian Classifier - AHFE Conference 2022 [[Link](#)]

AWARDS AND TECHNICAL PROJECTS

Google Developers Group Hong Kong Build With AI Hackathon • 1st Runner Up 05/2024

- Build web app to consistently conduct the highly interactive psychoanalytic ‘House-Tree-Person’ Test using Google’s Gemini-1.5 Vision Language Model, Vertex AI, and ample prompt engineering. [\[Link\]](#)

Maniskill 2 Challenge by University of California San Diego • 2nd Runner Up 07/2023

Global benchmarking competition on training data-driven generalizable manipulation policies for household tasks, beating 20+ teams worldwide to win a 3000 USD prize. [\[Link\]](#)

- Greatly improve data efficiency of SOTA AI agents with better ETL and computer vision pipelines

The Hong Kong Polytechnic University Congregation AI Announcer 04/2023 – 10/2024

Developed software to host the 2023 & 2024 Congregations for PolyU’s Academic Registry

- Implement relational database, ETL tools and pipeline to leverage several open-source AI models for generating sound files with accurate pronunciation across different languages. [\[Link\]](#)

Modified Car Engine Recognition with Deep Neural Networks • Final Year (Honors) Project A+, Technical Excellence Award (Top 3 in department) 09/2021 - 05/2022

- Develop Tensorflow pipeline to train, transfer learn, do data augmentation, visualize, and perform real-time inference, resulting in 85% recognition accuracy over 6 classes in noisy urban environments. [\[Link\]](#)

6 DOF Motion Simulator • 2nd Runner Up at EIE MCAD Design Competition 2022 03/2022

- Motion capture and robotics project, wrote first open-sourced Stewart Platform IK tutorial [\[Link\]](#)

COMMUNICATION AND WRITING

- ‘Considering a shared future between humans, post-humans and AI’ [Publication [Link](#)] (10/2022)
- PolyU writer and photographer for overseas projects [\[Publication\]](#) and [on campus](#) (09/2018 – 09/2021)
- [Reinforcement Learning Reading Club](#) participant, under Prof Edward Chung [\[Link\]](#) (05/2021–11/2021)
- [MIT Entrepreneurship and Maker Skills Integrator](#) participant [\[Link\]](#) (01/2021)
- Founder, Ex-president, Ex-coach English Debating Club, Chung Ling Private High (2015 - 2018)
- Native proficiency in English (IELTS 8.5), Mandarin, fluent in Cantonese and Malay
- GRE Score: Verbal Reasoning 163 | Quantitative Reasoning 163 | Analytical Writing 5.0

References available on request