Mark Cai Yee Lee

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EDUCATION

University of Wollongong **Wollongong, NSW**
Bachelor's of Engineering (Computer Engineering)(Honours)(Dean's Scholar)
- Weighted Average Mark (WAM): 85.01
- Cumulative Grade Average Point (CGPA): 3.97

Sunway University **Subang Jaya, Malaysia**
Western Australian Certificate of Education (WACE)
- ATAR: 94.65

Catholic High School **Petaling Jaya, Malaysia**
Malaysian Certificate of Education
- Result: 3A+ 5A 1B 1C

EXPERIENCE

Cisco Systems **Kuala Lumpur, Malaysia**
Network Consulting Engineer *July 2022 – Ongoing*
- Implementing and administering cisco solutions
- Troubleshooting platform and routing/ switching issues on cisco hardware

University of Wollongong **Sydney, Australia**
Researcher *December 2021 – March 2022*
- Researching the practical use of neural networks on vehicle counting
- Creating a prototype system which can count vehicles under daytime and nighttime environments
- Producing a research paper on the proposed system

University of Wollongong **Sydney, Australia**
Tutorial Demonstrator *March 2021 - June 2021*
- Assisting and conducting tutorials for a first year engineering subject
- Helping first year engineering students plan a sustainable village project
- Advising students on project management and risk management

Pusat Tuisyen Seri Cerdik Intelek **Bukit Jalil, Malaysia**
Private Tutor *December 2016 – March 2017*
- Tutoring primary school students English and Mathematics

ACHIEVEMENTS

- UOW Engineering and Information Sciences Summer Research Scholarship 2021
- UOW Dean's Scholar
- UOW Engineering and Information Sciences Dean's Merit List 2021
- UOW Engineering and Information Sciences Dean's Merit List 2020

PROJECTS

Smart Energy Sharing Wireless Local Area Networks
- Final Year Thesis
- Experimenting with energy sharing policies and how energy sharing can benefit access points
- Researching how access points with a limited energy source can use energy efficiently to service the most users

Real-time Vehicle Counting, Low Lighting and Accuracy Enhancement
- UOW Summer Research Scholarship Program
- Co-author for the paper Vehicle Detection, Counting and Classification - Accuracy Enhancement (Submitted to ICIC2022 Conference)
- Object detection using a convolution neural network
- Object tracking using a Kalman Filter, Hungarian Matching and Object Intersection over Union
- Nighttime detection using headlight pairing

Ordering Product Microservices
- Software Engineering Practices and Principles - CSCI318
- Using Java and Spring Boot to product microservices which enable product ordering and database management via REST and internal messaging using Apache Kafka

Truck Hazard Detection System
- Engineering Design and Management 3 - ECTE350
- Writing user interface for Main System Hub using QT Creator and GStreamer Libraries
- Interfacing a camera module and ultrasonic sensor module with the main unit using RTSP streams and SSH commands
- Organising group work, meetings and overall project coordination

Indoor Localisation using Bluetooth Low Energy
- Scholar's Project - ECTE355
- Experimentation with localisation using trilateration and Bluetooth beacons
- This project uses Gatttool on Linux to get Received Signal Strength Indicator and the data processing uses MATLAB

Custom Kernel for Samsung Galaxy Tab 2017 (SM-T385)
- Removing Samsung KNOX to enable root access and installation of Magisk
- Experimenting with Device Tree, Vendor Specific Blobs and building TWRP Recovery

Markdown Tools Plugin - Neovim
- Writing custom functions using Lua to automate repetitive tasks when writing LaTeX and Markdown on Linux

Telegram Bot
- Self-hosted Telegram bot to send news and currently airing anime on a daily basis using Python

Dementia Patient Activity Tracker
- Event driven programming using C++ and an Arduino

Skills and Software

- **Coursework:** Circuit and Systems, Wireless Networks, Internet of Things, Digital Signal Processing, Electronics, Control Theory, Communication Systems, Programming Autonomous Systems, Embedded Systems, Computer Vision, Deep Learning
- **Programming Languages:** Python, C, C++, MATLAB, Java, Bash, Lua, Assembly
- **Software and Tools:** MATLAB, AVR Studio, RobotOS, Microsoft Office, Vim, QT Creator, AutoCAD, Ubuntu, Arch Linux, CMake, Android Studio, OpenCV, Spring Boot, Apache Kafka
- **Certifications:** Cisco Certified Network Associate (CCNA)
- **Languages:** English, Mandarin, Cantonese, Hokkien, Bahasa Malaysia

EXTRACURRICULAR ACTIVITIES

President — **Petaling Jaya, Malaysia**
Cooperation Club, Catholic High School — *Jan 2016 - Dec 2016*
- Managing club daily affairs and organising quarterly activities
- Converting club member database paperwork to digital systems

Webmaster — **Petaling Jaya, Malaysia**
Cooperation Club, Catholic High School — *Jan 2015 - Dec 2015*
- Managing club website, Facebook group and online presence

Member — **Petaling Jaya, Malaysia**
Archery Club, Catholic High School — *Jan 2016 - Dec 2016*

Member — **Petaling Jaya, Malaysia**
Track and Field Club, Catholic High School — *Jan 2012 - Dec 2015*

Member — **Petaling Jaya, Malaysia**
Chinese Diabolo Club, Catholic High School — *Jan 2012 - Dec 2012*

REFERENCES

Associate Professor Kwan-Wu, Chin
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Associate Professor Le Chung, Tran
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