Wei Tat **Lee**

Electronics and Software engineering graduate with extensive programming skill in embedded systems. Currently looking for an internship or full-time graduate roles.

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EDUCATION

MSc Computer Science, The University of Edinburgh — Sep 2018 - present
Thesis: "An Investigation on the security aspects of blood pressure monitoring devices"

BEng Electronics and Software Engineering, The University of Edinburgh — Sep 2014 - May 2018
Undergrad thesis: "Demonstration of Visible Light Communication using LED(s)"

BEng Computer Engineering, The University of Texas at Austin — Aug 2016 - May 2017
Visiting Exchange Student

SKILLS

Proficient Python, C, Java, Hadoop, SQL, PCB Designs

Prior Experience C++, web development, Android development, Haskell, MATLAB, Javascript

Areas of Interest Embedded Systems, Security, Internet Of Things

Languages NATIVE: English, Mandarin PROFICIENT: Cantonese, Malay, Hokkien

EXPERIENCE

Graduate Project — June 2019 - present
- Found security vulnerabilities in the `QardioArm` Blood Pressure monitoring device
- Used `WireShark` to reverse engineer communication packets
- Deployed a `Men in the Middle` attacks

Undergraduate BEng Project — Aug 2017 - May 2018
- Built the whole system to demonstrate visible light communication using LED(s)
- Programmed Texas Instrument(TI) launchpad (ARM Cortex M4) to interface with the components
- Developed an `RTOS` embedded system for both the transmitter and the receiver in `C` programming language

Lead Assistant Coach, Edinburgh Chinese Badminton Club - *Edinburgh, UK* — Sep 2017 - present
- Led a team of assistant coach in assisting badminton coaching sessions.
- Organized and managed local badminton tournaments
- Getting qualified as UKCC Level 1 Scotland Coach

Team Member, UT Austin Autonomous Racing Team - *Austin , TX* — Sep 2016 - May 2017
- Developed and programmed the drone's control system, which is a SISO nonlinear feedback control system
- Programmed and tweak the RTOS to increase overall response time of the drone

PROJECTS

Knowing Where to Reduce: Efficient Methods for Image Captioning – GitHub
- Image captioning using encoder-decoder architecture with `PyTorch`
- Investigated the effect of having an adaptive over soft attention mechanisms in LSTMs architecture

Reconstruction of Office from a Set of 3D Point Clouds – GitHub
- Used `MATLAB` to reconstructed the inside of a office from a set of 3D point clouds acquired from an Intel RealSense depth sensor that was moved to scan different views

Room Occupancy Monitoring – GitHub
- Designed and prototype an end to end IoT system that consists of the embedded systems (`C`), the mobile application (`Java`) and visualization dashboard (`JavaScript`).

Paxos – GitHub
- Built an simulated a distributed protocol to solve consensus in a network of unreliable nodes
- Developed mainly using `Java` Socket Libraries
- This paxos protocol assumes no Byzantine Failures

The IoT – GitHub
- The IoT, an IoT system that regulates temperature and logs data into a cloud server programmed in `C`
- Capable of sensing gas leaks and sends alerts to user through mobile text messages by using `Twillio Apis`
- The IoT also uses google app engine (`GAE`) cloud Apis to store temperature data

AWARDS & RECOGNITION

Racing Competition, UT Austin — 2016
Pegasus has been awarded the first prize in the UT Austin Racing Competition

International Exchange Program, University of Edinburgh — 2015
Being selected among 10 student to participate in the international exchange program to the University of Texas, At Austin