

Louis Kueh

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Education

Imperial College London

[London](#)

MENG COMPUTER SCIENCE AND ELECTRONIC ENGINEERING (ELECTRONIC & INFORMATION ENGINEERING), PENULTIMATE YEAR

June 2015- Present

- Algorithms, Data structures & Complexity, Advanced Databases, Object oriented programming (C++), Graphics, Computer Architecture

Experience

Deutsche Bank

[London](#)

SOFTWARE DEVELOPER INTERN

June - August 2017

- Built web-service to automate manual reporting of tax forms, optimized SQL query through column store indexes - up to 10x faster
- Backend:** Java, Spring, Maven | **Front-end:** Bootstrap, Thymeleaf | **Quality Assurance:** JUnit, SonarQube
- Experienced industry development cycle - design, implementation, testing & code reviews
- Valuable technical knowledge gained through additional peer programming & shadowing developers

Projects

Internet of Things Table Tennis Device

PYTHON & MICROPYTHON, ESP8266 BOARD, HMC5883L MAGNETOMETER, LIS3DH TRIPLE-AXIS ACCELEROMETER

- Developed an embedded system that recognizes table tennis swings and offers feedback & statistics via an MQTT broker
- Implemented with a magnetometer and accelerometer on device, communicating via I2C & MQTT protocols
- Able to differentiate between different swings, and offer feedback on how to improve
- Learnt how to use low power communications protocols such as MQTT, and optimize code for memory efficiency

Websites

GITHUB PAGES, BOOTSTRAP, HTML, CSS

louiskueh.com, studentfinancetips.org

- Fully-responsive website to display portfolio, expanded upon knowledge gained from internships
- Immensely worthwhile, solidifying knowledge of HTML, CSS & Bootstrap

Graphic Design

GLSL, OPENGGL

- Developed & implemented illumination models in graphics pipeline (Gourand + Phong shading)
- Experimented with mesh subdivision through barycentric coordinates to output more vertices

C++ Compiler

FLEX, BISON, CODE GENERATION

- Individually built C++ to MIPS assembly compiler from scratch, from inputs to code generation
- Flex** Utilized regex to capture characters | **Bison** Defined abstract syntax tree to parse inputs
- Generated MIPS assembly by hand - improved understanding of low level programming (jumps, branch prediction etc)
- Utilized bash scripting to generate test cases to evaluate functionality

2D platformer

C#, UNITY

- Utilized programming knowledge in game development environment
- Developed knowledge of animations, jumping, collisions and scoring

Activities

Imperial College Table Tennis Society

[Imperial College London](#)

PRESIDENT

September 2017 - PRESENT

- Built Node JS app to check if someone is a member of the table tennis club (HTTP request)
- Ensured inter-university matches (BUCS) are played to an appropriate standard
- Increased awareness of table tennis by building the website for the club and advertising flyers

Undergraduate Teaching Assistant

[Imperial College London](#)

EE1-07 SOFTWARE ENGINEERING 1: INTRODUCTION TO COMPUTING

Sept 2017 - Jan 2018

- Selected to teach C++ to incoming students
- Brushed up & developed further knowledge of C++ in order to handle any questions