Lei Wang

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Education

Texas A&M University   *College Station, United States*

MASTER OF ENGINEERING IN ELECTRICAL ENGINEERING   *Aug. 2019 - Present*

- Orientation: Information Science and System

Imperial College London   *London, United Kingdom*

BACHELOR OF ENGINEERING IN ELECTRICAL AND ELECTRONIC ENGINEERING, SECOND-CLASS HONOURS, UPPER DIVISION (2.1)   *Oct. 2016 - Jun. 2019*

- BEng Final Year Project: A high level schematic editor for simplified Hardware Description Language (HDL) Entry

Skills

Programming	C, C++, Verilog HDL, Arm Assembly, Matlab, Python, HTML, CSS, JavaScript, SQL, F#
Frameworks	Flask, Electron, Fable, Node.js
Languages	Chinese(Native), English(TOEFL 106, IELTS 7.0), Japanese(JLPT N3 Pass)
Extra	Autodesk AutoCAD, LaTeX, Microsoft Office, git, Chinese flute (Dizi)

Experience

Imperial College Union   *London, United Kingdom*

STUDENT SYSTEM ADMINISTRATOR (PART TIME)   *Nov. 2018 - Mar. 2019*

- Working with the Imperial College Union Administration Team.
- Configuring and maintaining WordPress websites for student clubs and societies at Imperial College London.

Fleetonomy   *Tel Aviv, Israel*

SOFTWARE ENGINEERING INTERN (FULL TIME)   *Jul. 2018 - Sep. 2018*

- Developing the testing interface as part of a Uber-like web application in Python, JavaScript and SQL.
- Worked on frontend, backend, unit test and database.
- Worked on integrating third-party monitoring services such as Datadog via API calls to the web application.

Summer Academy of Code   *Oxford, United Kingdom*

LEARNER   *Sep. 2017*

- Learning dynamic website developing and hosting.
- Developed an online accounting application using Node.js.

Global IELTS   *Changshu, China*

ENGLISH TEACHER (PART TIME)   *Jul. 2017 - Aug. 2017*

- Teaching students English reading, listening, speaking writing and vocabulary to prepare for TOEFL (English proficiency exam).

Piwars   *Cambridge, United Kingdom*

COMPETITOR   *Apr. 2017*

- Robotics competition. Teamed up with BigSubhakrish Krishnamra, Haojun Zhang, Hang Su and Ruochen Zhao.
- Designed and built a functional remote-control car based on the Raspberry pi with sensors.

Global IELTS   *Changshu, China*

ENGLISH TEACHING ASSISTANT (PART TIME)   *Aug. 2016 - Sep. 2016*

- Helping students learn and memorize English words required for English proficiency test.
- Marking vocabulary exercises and giving feedback to students.

Projects

Encryption Algorithm   *London, United Kingdom*

SCHOOL COURSEWORK   *Dec. 2016*

- RSA-based encryption decryption system written in C++.

2048
London, United Kingdom

SCHOOL COURSEWORK · *Feb. 2017*

- Command line interface implementation of the classic 2048 game, written in C++.

First Year Project
London, United Kingdom

SCHOOL COURSEWORK · *Nov. 2016 - May. 2017*

- Built a remote-control rover with the capability of detecting waves and calculating the corresponding frequencies.

Personal Website
London, United Kingdom

PERSONAL PROJECT · *Apr. 2017*

- Personal website development in HTML, CSS, JavaScript. Deployed in AWS S3.

Second Year Project
London, United Kingdom

SCHOOL COURSEWORK · *Nov. 2017 - Mar. 2018*

- Gloves with sensors built in to detect palm facing, acceleration and finger bending for sign language translation.
- The readings from sensors are used in training machine learning models.
- Sign language translation achieved by feeding sensor readings to machine learning models.
- https://wilsonwang881.github.io/Glovoice/

A Web-based Price Calculator
London, United Kingdom

PERSONAL PROJECT · *Nov. 2018*

- Used for applying internship at UNiDAYS.
- https://wilsonwang881.github.io/UNiDAYSApplication/

Adding Features to Visual2, the Arm Assembly Simulator
London, United Kingdom

SCHOOL COURSEWORK · *Jan. 2019 - Mar. 2019*

- Teamed up with Andrei Pietreanu, Leszek Nowaczyk and Wim van der Schoot. Coding in F# and JavaScript.
- The project added new features to Visual2, including pipelining display, multiplication instructions and improvement to the error messages.

Using FPGA for Algorithm Acceleration
London, United Kingdom

SCHOOL COURSEWORK · *Jan. 2019 - Mar. 2019*

- Teamed up with Yaukuen Lam.
- Configure a FPGA device to run the NIOS II processor.
- Algorithm written in C and uploaded to the FPGA device. The NOIS II processor running on FPGA then executed the C program.
- Explore ways to reduce execution time, including using pipelining, different types of multipliers, and the CORDIC algorithm.
- Customized hardware blocks to realize the CORDIC algorithm with pipelining.
- Result was promising as using dedicated hardware did reduce the execution time significantly. However, the tradeoff was an increase in hardware usage.

Final Year Project
London, United Kingdom

SCHOOL COURSEWORK · *Apr. 2019 - Jun. 2019*

- Cross-platform graphical hardware description language (HDL) editor that outputs Verilog HDL code which can run on FPGA devices, implemented in F#.
- Integrated with the Fable compiler to transpile F# to JavaScript.
- Transpiled JavaScript code run under the Electron framework.

Robomaster
College Station, United States

GROUP PROJECT · *Aug. 2019 - Now*

- Writing C code to control robots for various tasks, including movement and gimbal actions.
- Expect to participate the 2020 Robomaster Competition in Shenzhen.