

# Lei Wang

☎ (1) 9797390561 | ✉ WilsonWang2019@tamu.edu | 🌐 wilsonwang.org | 📱 wilsonwang881 | in leiwangwilson

## Education

### Texas A&M University

College Station, United States

PHD IN COMPUTER ENGINEERING

Aug. 2019 - Present

- Advisor: Dr Paul Gratz

### 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)

**Extra** Autodesk AutoCAD, STM32CubeMX, Keil, Visual Studio, Intel Pin, LaTeX, Microsoft Office, git, Dizi(Chinese flute)

## Experience

### Texas A&M University

College Station, United States

ECEN 350 COMPUTER ORGANIZATION AND DESIGN GRADER

Aug. 2020 - Dec. 2020

- Grading and giving feedbacks on students' exercises and labs.

### Texas A&M University Robomaster Society

College Station, United States

TAMU ROBOMASTER ROBOTICS ADVISOR

Aug. 2020 - Present

- Working with the embedded and the computer vision teams.
- Writing and debugging code in C/C++ for ARM cortex M4 processor.
- Advise on the control of the robots used for Global Robomaster Competition.

### 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

- Teaching students to learn and to memorize English words required for English proficiency test.

## Projects

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### Encryption Algorithm

SCHOOL COURSEWORK

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

[London, United Kingdom](#)

Dec. 2016

### 2048

SCHOOL COURSEWORK

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

[London, United Kingdom](#)

Feb. 2017

### First Year Project

SCHOOL COURSEWORK

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

[London, United Kingdom](#)

Nov. 2016 - May. 2017

### Personal Website

PERSONAL PROJECT

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

[London, United Kingdom](#)

Apr. 2017

### Second Year Project

SCHOOL COURSEWORK

- 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/>

[London, United Kingdom](#)

Nov. 2017 - Mar. 2018

### A Web-based Price Calculator

PERSONAL PROJECT

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

[London, United Kingdom](#)

Nov. 2018

### Adding Features to Visual2, the Arm Assembly Simulator

SCHOOL COURSEWORK

- 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.

[London, United Kingdom](#)

Jan. 2019 - Mar. 2019

### Using FPGA for Algorithm Acceleration

SCHOOL COURSEWORK

- 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.

[London, United Kingdom](#)

Jan. 2019 - Mar. 2019

### Final Year Project

SCHOOL COURSEWORK

- 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.

[London, United Kingdom](#)

Apr. 2019 - Jun. 2019

### Book-Keeper

GROUP PROJECT

- Software for handling reimburse requests within the TAMU Robomaster Society.
- Technology stack: React, Nginx, Gunicorn, Python Flask, deployed using Docker.
- <https://github.com/GigaMansion/Book-Keeper>

[College Station, United States](#)

May. 2020 - Now

## Honors and Awards

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### Graduate Merit Scholarship

TEXAS A&M UNIVERSITY

- From the Department of Electrical and Computer Engineering.

[College Station, United States](#)

Aug. 2020