

# Jeffrey Tsaw

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## Contact

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🌐 github.com/jeffreysaw

## Coursework

ELEC0024 – Digital Signal Processing and Design (UCL)

ELEC0029 – Electronic Devices and Nanotech (UCL)

18-349 – Introduction to Embedded Systems

18-341 – Logic Design and Verification

15-213 – Introduction to Computer Systems

21-325 – Probability Theory (Honours)

## Technical Skills

### Languages

Python ■ C ■ SystemVerilog  
■ ARM ■ x86-64 ■ MATLAB

### Tools

Linux ■ Git ■ GDB ■  
Simics ■ Windows ■ FPGA

## Activities

### CMU Club Tennis Team

Aug 2019 – Present

- Quarterfinalist at 2019 USTA Regionals

### London Dragons Varsity Hockey Team

Jan 2020 – Jul 2020

- BUIHA Division 1 South Champions

### CMU Club Hockey Team

Aug 2017 – Present

### Asian Student Association

Aug 2017 - Present

## Interests

- Hockey
- Tennis
- College Basketball
- Football
- Math
- Jazz Music

## Education

### Carnegie Mellon University

Pittsburgh P.A | Expected May 2022

M.S, B.S Electrical & Computer Engineering

- GPA: 3.87/4.00 | Dean's List F17 – S19
- HKN and TBP Honour Societies

### University College London

London, UK | Study Abroad, Spring 2020

Affiliate Electrical and Electronic Engineering

## Experience

### Credit Suisse Securities

Technology Analyst Intern | New York, NY (virtual) | Jul '20 – Aug '20

- Designed and developed a 2-stage pipelined model to extract bond tickers, ISINs, and CUSIPs from Bloomberg chat data in an Agile environment
- Trained and tuned an NER model in spaCy to recognise bond information and non-bond entities with over 98% precision and recall
- Successfully extracted over 90,000 bond tickers

### Carnegie Mellon University

15-213: Computer Systems TA | Pittsburgh, PA | May '19 – Aug '19

- Taught fundamental computer systems concepts including x86-64 ASM, dynamic memory allocation, processes and threading to classes of 30+ students
- Developed undefined behaviour tests against students' implementations of malloc

### Academic Development

SI & EXCEL Leader | Pittsburgh, PA | Aug '18 – Present

- Designed and lead supplementary classes for Multivariable Calculus, Physics II, and Physics I for multiple groups of 10-100

## Projects

### Power Grid RL Operator

Quarantine Project | May '20 - Present

- Developed from scratch DQN and Double Duelling DQN agents with PER in Tensorflow to operate a power grid in grid2op environment
- Achieved 3500% increase in operation time before failure in 14 node power grid compared with baseline agent.

### Serial Engine Interface– USB 2.0

Partner Project for 18-341 | Nov '19

- Implemented IN, OUT, DATA0, ACK, NAK packets and a control FSM to simulate read, write transactions with a thumb drive as part of the USB 2.0 standard

### Resume Job Compatibility Algorithm

Credit Suisse Coding Challenge | May '19

- Using Python and spaCy, developed and trained NER and NLP models to extract key details from resumes
- Developed an algorithm to use details to find best candidate given a job description
- 1st place at Credit Suisse Coding Challenge