

# Eric Yap Wei Lok

[ericywl@live.com](mailto:ericywl@live.com) | [ericywl.github.io](https://ericywl.github.io) | 65-8121-9331

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## TECHNICAL SKILLS *(For the list below, N stands for Novice)*

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- **Programming Languages** – Python, JavaScript, Java, C++ (N), C (N)
- **Frontend** – HTML, CSS, ReactJS / JSX, jQuery (N)
- **Backend** – Django, Flask, NodeJS (N), Spring Boot (N)
- **Database** – PostgreSQL (N), MongoDB (N)
- **Machine / Deep Learning** – PyTorch, NumPy
- **DevOps / Others** – Git, Bash, Linux, Jest (N), PyUnit (N), JUnit (N), Travis CI (N)

## EDUCATION

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### Singapore University of Technology & Design (SUTD)

May. 2016 – Dec. 2019

*Bachelor of Engineering, Information Systems Technology and Design*

*Singapore*

- Relevant coursework: Software Engineering, Machine / Deep Learning, Algorithms, Networks, Security etc.

## WORK EXPERIENCE

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### Continental Automotive

May. 2018 – Aug. 2018

*Cybersecurity Research Intern*

*Singapore*

- Researched on automotive electrical control unit (ECU) bootloader security
- Proposed new ECU secure boot protocol, which was patented by the company
- Presented secure boot protocol proof-of-concept written in C to Continental engineers around the world via video conference

## PROJECTS

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### NVIDIA Artificial Intelligence Research Assistant

Jan. 2019 – Aug. 2019

*Data Processing Pipeline / Backend Software Engineer (Python, Django)*

- Performed unit testing on data processing components using Python's UnitTest library
- Improved team productivity by managing backend code repository, formalizing issues and assigning them to members
- Project management was done using Scrum (Agile), with 2-weeks sprints in-between researcher meeting
- Nominated for outstanding projects in SUTD Capstone Presentation 2019 amongst 60+ teams

### LANL Eartquake Prediction

Apr. 2019 – May. 2019

*Deep Learning Developer (PyTorch)*

- Deep learning application to forecast earthquakes based on laboratory acoustic data
- Implemented and compared various existing neural network models in a team of 3
- Best model (PWaves-DenseNet) achieved 2.18 validation Mean Absolute Error (MAE) and 1.66 test MAE

### PascalVOC Image Classification

Feb. 2019 – Mar. 2019

*Deep Learning Developer (PyTorch)*

- Deep learning application to classify images, trained on the PascalVOC dataset
- Implemented ResNet model with FiveCrop data augmentation and achieved 88% Average Precision

### Archwing Ethereum dApp

Nov. 2018 – Dec. 2018

*Ethereum Smart Contract Developer (ReactJS, Solidity)*

- Flight delay / cancellation insurance distributed application with simplistic frontend, deployed on TESTNET Ethereum

### STUDChat WebApp

Feb. 2018 – Apr. 2018

*Full-Stack Developer (ReactJS, MeteorJS, Heroku)*

- A chatting platform for SUTD members, aimed at improving communications for interested impromptu events

### StackerOverflow

Oct. 2017 – Dec. 2017

*Field Programmable Gate Array Programmer (LucidHDL)*

- Homage to the Stacker arcade game, implemented on Mojo FPGA, complete with custom-made game cabinet
- Voted best project of the Computation Structures course 2017 amongst 20+ teams and showcased in SUTD Open House 2018

### Others (Available at [github.com/ericywl](https://github.com/ericywl))

2017 – 2019

- **2019:** Personal Porfolio (*ReactJS / GatsbyJS*), Photon RayTracer (*C++*)
- **2018:** PyTor Onion Routing (*Electron, Python*), Twitter POS Tagging with HMMs (*Python*)
- **2017:** SG Temple Tour App (*Android*), ProfChoper Webapp (*HTML / CSS, jQuery, Spring Boot*)

## LANGUAGES & INTERESTS

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- **Languages:** English (*fluent*), Chinese (*intermediate*), Japanese (*basic*)
- **Interests:** Exploring new technologies, Cybersecurity, Problem solving, Japanese culture