Eric Yap Wei Lok

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

- **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** – Jest (*N*), Junit (*N*), PyUnit (*N*), Travis CI (*N*)
- **Others** – Git, Bash, Linux, LaTeX

EDUCATION

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

Continental Automotive   **May. 2018 – Sep. 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

NVIDIA Artificial Intelligence Research Assistant   **Jan. 2019 – Aug. 2019**
Data Pipeline / Backend Software Engineer
- Designed data processing pipeline with Python and contributed in Django backend
- Performed unit testing using Python's UnitTest library and managed machine learning / backend code structure
- 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
- Flight delay / cancellation insurance distributed application with ReactJS frontend and smart contracts implemented in Solidity

STUDChat WebApp   **Feb. 2018 – Apr. 2018**
Full-Stack Developer
- A chatting and impromptu events platform for SUTD members, implemented with ReactJS and MeteorJS, hosted on Heroku

StackerOverflow   **Oct. 2017 – Dec. 2017**
Field Programmable Gate Array (FPGA) Programmer
- Homage to the Stacker arcade game, implemented on Mojo FPGA with LucidHDL, 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)   **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

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