Yong Jian Quek

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Looking for opportunities to develop and integrate data science techniques with innovative features for web applications anywhere along the stack. Currently seeking an internship for Summer 2020.

Education

Georgia Institute of Technology *August 2019 - May 2020*
Masters in Computational Science and Engineering — GPA 4.0/4.0

National University of Singapore *August 2015 - May 2019*
Bachelor of Engineering (Mechanical) with Honors (Highest Distinction) — GPA 4.51/5.00
Specialization in Automotive Engineering and Minor in Computer Science — Valedictorian

Current Coursework

Graduate Algorithms
- Greedy and Dynamic Programming paradigms
- Heuristics and methods for NP-hard problems

Data & Visual Analytics
- Dynamic data presentation using D3.js
- Data analysis with Tableau
- MapReduce with Hadoop

Machine Learning
- Classification methods such as SVM, Random Forest
- Markov-chain Models
- Regression

Modeling and Simulation
- Discrete Event Scheduling
- Agent Based Modeling

Technical Skills

Programming	C/C++, Java, Python	**Data Analysis**	Hadoop, Tableau, Spark
Web Development	MongoDB, Express.js, Node.js, D3.js, bootstrap	**Cloud Computing**	AWS (EC2, EMR), Azure
		Engineering	CAD, Control Systems

Projects and Research

AidHub | Web Application *April 2020*
- Built an information hub to connect volunteers with opportunities, and bring help to those who need them during the COVID-19 pandemic
- D3.js driven frontend design that enables CRUD operations on a MongoDB server
- Deployed an AWS EC2 node as a production server

Car.m.a | Data Visualization Project *August 2019 - December 2019*
- Developed and implemented the full stack for a web application that displays the best ranked cars in an area
- Utilized MongoDB, Node.js and Express.js to provide a RESTful API for the frontend
- Designed a responsive and dynamic data visualization using D3.js and bootstrap

FairShare | NUS Hack & Roll 2019 Hackathon Top Prize *January 2019*
- Built a responsive application for a hackathon using bootstrap on top of cordova framework
- Integrated bill splitting capabilities with optical character recognition abilities and automation with e-payment platforms

Self-Balancing Bicycle | NUS Final Year Project *August 2018 - May 2019*
- Designed a control algorithm based on a bicycle's dynamic model to autonomously steer a bicycle at low speeds
- Programmed an Arduino to implement the control algorithms

Professional Experience

Krauss-Maffei Wegmann | Engineering Design Intern *June 2019 - August 2019 | Munich*
- Designed components using computer-aided design (CAD) for a Leopard 2 Main Battle Tank
- Conducted environmental testing of production components
- Wrenched in main components on the factory floor

Defence Science And Technology Agency | Systems Integration Intern *June 2017 - December 2017 | Singapore*
- Conducted an integration study of military components for a combat engineering vehicle using CAD and simulation
- Explored the use of virtual reality to visualize CAD models

National University of Singapore | Teaching Assistant *August 2016 - May 2017 | Singapore*
- Teaching assistant for Programming Methodology (CS1010E)
- Conducted computer laboratory sessions for students, coaching them on fundamental programming concepts

Extracurricular Activity

- President, Singapore Society at Georgia Tech
- Bicycle Technician, Starter Bikes at Georgia Tech
- Treasurer, Society of Mechanical Engineers at NUS
- Project Director, Charity Night Cycling 2019 at NUS
- Documentary Main Cameraman,
  The Conservation Conversation, DBS Gold Award at the National Youth Film Awards (2017)
  Screened at the Singapore Eco Film Festival (2016)