

# Jethro Kuan

[jethrokuan95@gmail.com](mailto:jethrokuan95@gmail.com)

*I enjoy learning and building new things, dabbling in software engineering, machine learning and robotics, with a focus on machine learning.*

## EXPERIENCE

### Twitter, Singapore — Data Scientist (Intern)

May 2019 - Aug 2019

Feature engineering work on Twitter's push notification recommendation system, which resulted in improvements over most offline metrics.

Built several data pipelines that are used in downstream in data analyses, aiding in making business decisions.

Worked heavily with many tools used across Twitter for data analysis and machine learning, including Hadoop, Scalding, Tableau, Zeppelin, Airflow among others.

### Carousell, Singapore — Data scientist (Intern)

May 2018 - Nov 2018

Trained and deployed Smart Reply models for international countries, involving dealing with mixed-language corpora.

Trained and deployed a Question-answering model for international countries.

[Trained the model, and built the backend and pipelines used for Image Search and Price Suggestions.](#)

Attempted image segmentation on image corpora using SOTA image segmentation techniques.

Worked regularly with Big Data processing tools and platforms, such as Apache Spark with Google Dataflow, Dataproc and BigQuery.

### Carousell, Singapore — Full-stack Engineer (Intern)

May 2017 - Nov 2017

Migrated staging environment to CI/CD via Docker and Jenkins.

Designed, AB-tested and deployed a user-facing feature.

Designed and implemented dynamic sitemap generation, greatly boosting the level of organic traffic.

Deployed and hardened the servers for the company's self-hosted blog.

Used Deep Learning for listing similarity and price suggestions, project submitted and won 11th STePS Best Project Award.

## RESEARCH EXPERIENCE

## SOCIAL

LinkedIn: [jethrokuan](#)

Github: [jethrokuan](#)

Website: [jethro.dev](#)

## SKILLS

Spoken Languages

English, Chinese

Programming Languages

**Experienced:** Python, Scala, C++, Java, Javascript, SQL

Tools

**Web:** Node.js, Express, Django, React/Redux, Vue

**Data/ML:** Hadoop, Spark, Scalding, Scipy, Tensorflow, Pytorch, Gensim

**Infra:** SQL DBs, Redis, Kafka, RabbitMQ, Docker, Kubernetes, GCP Tools (e.g. Dataflow, Biquery)

**Robotics:** ROS, Gazebo

## AWARDS

11th School of Computing Term Project Showcase 2017, **1st Place**

12th School of Computing Term Project Showcase 2018, **3rd Place**

Smart Living Hackathon 2018, **3rd Place**

Hackfest.sg, **3rd Place**

IT Youth Award Singapore 2014, **Nominee**

SITF Awards 2013, **Gold**

## Reinforcement Learning With Spiking Neural Networks @ Collaborative Robots & Systems Lab, Singapore

Aug 2019 - Present

Research involves making spiking neural networks practical for robotic applications, using gradient-based Reinforcement Learning techniques.

## Undergraduate Research @ WING NUS, Singapore

Jan 2018 - Nov 2018

Research around introducing deep learning techniques for topic modelling

[Implemented LDA2Vec](#), and designed experiments about it.

## EDUCATION

### National University of Singapore, Singapore — *B.S. in Computer Science*

MONTH 20XX - May 2020 (Expected)

Cumulative Average Point: 4.58/5 (First Class Honours)

Courses taken: Programming Methodology, Computer Architecture, Operating Systems, Networking, Programming Language Concepts, Compilers, Probability and Statistics, Data Structures & Algorithms, Machine Learning, Artificial Intelligence

## PROJECTS

### [Org-roam](#) (294★) — A Rudimentary Roam Replica in Org-mode

A refined note-taking workflow, whose [accompanying blog-post](#) made the HN front-page.

Managing the entire OSS project cycle, including documentation, continuous integration, issue triaging, reviewing and merging PRs.

### [New Spirit](#) — A Prototype Rover

Performs distributed computing using ROS, running on Raspberry Pis and Arduino microcontrollers.

Wrote a simple Android application to send teleoperation commands from a phone to the rover over a WebSocket connection.

### [Sharedb-ace](#) — *Collaborative Text Editing*

Provides 2-way bindings between ShareDB and Ace Editor

Built for a school module (CS1101S) to enable collaborative code editing in the self-hosted learning environment

## EXTRA-CURRICULARS

NUS Hackers, Coreteam  
Emacs SG, Founder

## TALKS

Friday Hacks: [Real-time Collaboration](#)

Friday Hacks: [Productivity With Free Software](#)

IDP Bootcamp 2019: [Introduction to ROS](#)