Stuart **Mashaal**

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Education

McGill University	*Montreal, CA*
B.S.Eng - Bachelor of Software Engineernig	*September 2015 - April 2019*

Advanced Coursework: Concurrent Programming, Distributed Systems, Cloud Computing, Applied Machine Learning, Compilers

Experience

Nuance Communications *Montreal, CA*
Software Engineering Intern - (Java, ActiveMQ, SQL, Python/Pandas/SKlearn, Nodejs) *May 2018 - August 2018*
- Collected job history data from production databases to train classifier for job duration
- Used Random Forest to achieve 97% accuracy on balanced dataset (k-fold cross-validation)
- Improved usability and responsiveness of data-aggregation CLI tool

SourceKnowledge *Montreal, CA*
Software Engineering Intern - (PHP, Symphony, JQuery, Handlebars) *May 2017 - August 2017*
- Added features (frontend and backend) to analytics dashboard of real-time ad-bidding system
- Developed bid-multiplier logic based on Google's website categorization, added to real-time ad-bidding system

IntimateData / DataProphet *Cape Town, South Africa*
Data Science Intern - (Python, SKlearn, R, SQL) *June 2016 - July 2016*
- IntimateData: scraped, cleaned and visualized S.A. demographic and language data. Incorporated into existing MySQL DB.
- DataProphet: researched sentiment analysis algos (e.g. LSTM) for Twitter-Bot project. Developed XGBoost-based classifier of EEG waves for 'mind-control wheelchair' prototype

Projects

NorthernlightsVision ☐ *Personal Project*
(Javascript, AWS, Terraform, Tensorflow) *August 2019 - Present*
- A tool to notify users about northern lights visibility and provide related charts and information
- Set up all AWS configuration, then ported it to Terraform
- Developed data-labelling interface
- Used popular ConvNet to classify night sky as containing Aurora Borealis (or not)

Distributed Transactions Project ☐ *Distributed Systems, McGill*
(Java RMI, Concurrency/Parallelism, Two-Phase Commit) *September 2018 - December 2018*
- A system for travel reservations (flights, cars, hotel rooms)
- Designed and implemented a distributed system including lock management and consensus protocol
- 2 separate communication implementations: one using RMI, one using Java Object Serialization

ConuCoursePlanner ⚲☐ *Personal Project*
(Java Tomcat, Nodejs, R, React, MongoDB) *January 2017 - January 2018*
- A tool to help incoming freshmen select the course sequence of their curriculum
- Developed entire data pipeline: web scraper, data validator, and storage
- Wrote the project's core curriculum validation algorithm.
- 100 unique active users per month

Cebolla (Onion Routing Network) ☐ ▶ *Telecomms & Networks, McGill*
(Python, Cryptography, Multithreading) *September 2017 - December 2017*
- Wrote all code for router node and directory node algorithms
  - Cryptography was handled with direct use of RSA and AES
  - Tested on cluster of 100 servers

Skills

Programming Java, Python, Javascript, OCaml, Bash, Go, Haskell, SQL, R
Cloud & Infra. Linux, Git, Basic Networking, Terraform, AWS, Docker/Kubernetes
Other French (B2), Guitar, Public Speaking