Fuad Ali

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Experience

Software Engineer Intern | **Tesla** | **Palo Alto, California** | Jan 2020 - Apr 2020

- Working with functional programming in Scala to enable distributed streaming applications in Kafka and Akka
- Significantly shortening load times for the Tesla Mobile App by building a clustered micro-service in Kubernetes that handles massive request loads gracefully using circuit breakers and back pressure
- Contributing to the hierarchical asset aggregation system for the Tesla Virtual Power Plant, enabling Autobidder

Software Engineer Intern | **Wealthsimple** | **Toronto, Canada** | Sept 2019 - Dec 2019

- Developed backend to increase speed and reliability of deposits and withdrawals using Ruby on Rails
- Implemented filtering algorithm in Java to sort and visualize transactions between financial institutions
- Architected production-grade email notification service, enabling back-end state machine to notify customers

Data Scientist Intern | **Office of the Director of National Intelligence** | **Washington, DC** | Aug 2019 - Apr 2020

- Researching data compression techniques (Huffman encoding, Chaos Theory) for high-volume DNA data
- Building a software platform to pre-process DNA files, and select optimal compression protocols

Software Development Engineer Intern | **Publicis Sapient** | **Toronto, Canada** | Jun 2019 - Aug 2019

- Developed a machine learning powered chatbot by employing K-Means Clustering on click-stream data
- Analyzed the performance of $500 million+ eCommerce site to identify bottlenecks, resulting in faster load times

Software Engineer Intern | **Pickup Rideshare** | **Hamilton, Canada** | Apr 2018 - Aug 2018

- Architected a matching algorithm (Gale-Shapley) to match riders with available drivers
- Engineered a progressive web app using React, redesigned the home page to increase customer retention by 20%

Multi-Organ Transplant Researcher | **Toronto General Hospital** | **Toronto, Canada** | May 2017 - Aug 2017

- Developed a machine learning algorithm in Python to detect severe liver disease, enabling early life-saving treatment
- Trained and validated machine learning models by normalizing and cleaning patient data
- First author on Meta-Analysis published in the Canadian Liver Journal - bit.ly/nashgen

Education

B.Eng, Electrical & Biomedical Engineering (Co-op) | **McMaster University** | Expected Apr 2021

- Deans Honor List (2016-2018), Honors Entrance Scholarship ($2000), 3.4/4.0 GPA
- Relevant courses: Data Structures and Algorithms, Discrete Math, Statistics, Vector Calculus, Molecular Biology

Skills

Languages: Python, Java, Ruby, Scala, SQL, C, C++, JavaScript, Swift, MATLAB, Assembly
Tools and Frameworks: Kubernetes, Pandas, AWS, Bootstrap, TensorFlow, Rails, Firebase, Node.JS, Git/Version Control

Projects

Unmask | **Personal Project** | Aug 2019

- Developed a computer vision application using Ruby on Rails to analyze media sentiment based on pictures of faces
- Trained a facial recognition model using OpenCV on Amazon Web Services and deployed on the cloud

Strive | **MedHacks, Johns Hopkins University** bit.ly/striveJHU | Sept 2018

- Utilized computer vision (Google Vision API) to extract nutritional info from user uploaded pictures of food, allowing users to track their calories in a virtual food diary. Placed 2nd of 200+ teams