

# ADITYA (ADI) SHARMA

## Employment

- IBM**  
Data Scientist and Engineer
- Sept. 2018 to Current
- Performed numerous data wrangling operations and EDA using tools like Tensorflow, pandas, and scikit-learn on large amounts of unstructured sensor data (about 500 GB) and meta data(20 GB) from various data sources from thousands of oil wells to make a pump failure prediction model
  - Developed an orchestrator that spawns new workers that monitor Cloud Object Storage (IBM's version of S3) and relay and store any new addition to a NoSQL DB (Cloudant), increasing efficiency by 500%
  - Used multithreading (joblib) and multiprocessing(dask, multiprocessing) to make data ingestion pipeline 30 times faster than it's previous state
  - Currently working on migrating from IBM DB2 to Cassandra to make data more accessible and infrastructure scalable

- Citco Fund Services**  
Software Engineering Intern
- Toronto, ON  
Jan. 2018 to Apr. 2018
- Designed and developed an end-to-end web application that monitors and records the health of various APIs, URLs, and services, records the results and alerts the service owner in case of malfunction using JavaEE, Spring MVC, Hibernate, SQLServer, Maven and Tomcat reducing average service downtime by three days
  - Implemented caching, logging and multithreading features to make the web application more reliable, stable, and robust
  - Designed, developed and shipped a RESTful backend API from scratch based on business requirements using object oriented design to be consumed by various third-party clients using C# and Entity framework
  - Fixed and shipped various bugs on the front-end in the main client-facing web application supporting the company using React with Angular dependency injection.

- Shaw Communications**  
Software Engineering Intern
- Calgary, AB  
Jan. 2017 to Apr. 2017
- Used Tableau to visualize and analyze customer base in Calgary and recommend strategies for customer acquisition and growth
  - Designed and implemented various features on the front end for Shaw's landing pages with regards to the Phone Plan using Angular, HTML/ CSS
  - Decreased double AA accessibility issues according to WCAG ARIA standards on the entire platform by 48% across the entirety of Shaw's main online platform and hence saving about \$15,000 in fines

## Selected Projects

- MyoVision**
- Designed, develop a system that plans workouts and tracks the number of push-ups performed by an individual over a given frame of time using the Myo armband
  - Analyzed the data gathered via the various sensors to perform relevant statistics over the quality of push-ups
  - Recommended ways of improving posture based on the statistics collected

- Various Kaggle (Data Science) Competitions**
- Titanic: Built a machine learning model to make predictions about what sort of people are likely to survive from the tragedy
  - Real Estate: Built a Housing price predictor to predict the price of houses based on various features
  - Created a World Cup prediction model to determine who is going to win the FIFA World Cup
  - In Progress: Two Sigma - Using News to Predict Stock Movements

- Sentimental Analysis**
- Scrapes twitter for a given topic/conversation
  - Analyses the twitter sentiment(emotions associated and polarity) of an user on a given topic/conversation
  - Stores the result in a relevant CSV file and displays the results in a clean UI

## Awards

- Loran Scholar's Foundation · Loran Scholar**
- June 2016
- One of 31 Recipients selected out of 4500 to receive the Loran Scholarship, Canada's most comprehensive scholarship offered on the basis of leadership, character, service and grit
- University of Waterloo · Sanford Fleming Foundation Scholarship**
- 2017
- Awarded for winning the Waterloo Engineering Competition competing against students ranging from first year all the way to grad students. Got a chance to represent University of Waterloo in the Ontario Engineering Competition in Ottawa, Canada.
- ECHacks 2017 · Wolfram One Award**
- Nov. 2017
- Awarded to the most promising, innovative and potential-worthy hack (MyoVision)

## Education

- University of Waterloo**
- 2016 to Current
- Bachelor's of Applied Science Computer Engineering
- Coursera, Bloomberg, Udacity**
- Numerous Courses in Machine Learning, Data Science and Software Development

## Contact

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## Skills

### Languages :

Python  
C++  
SQL  
Java  
Javascript  
R  
HTML/CSS  
C#  
Bash

### Frameworks/Technologies

Tensorflow  
Spark  
scikit-learn  
Docker  
pandas  
AWS Redshift  
IBM DB2  
Cassandra  
PostgreSQL  
Spark  
Kubernetes  
Git

## Involvement

- Watonomous (Self-Driving Car Student Design Team)**
- UW Data Science Club**
- UW Badminton Club**
- Effective Altruism Club**

## Activities

When I'm not tinkering with/learning about new tech or in classes, you can probably find me:

- Volunteering; I find great joy in giving back to the communities and causes that I am passionate about
- Reading/Listening to cool and interesting books and podcasts.
- Playing badminton/ table-tennis/tabla(Indian percussion)