

# Siddhanth Unnithan

3B Systems Design Engineering Student

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github.com/SiddhanthUnnithan

## EXPERIENCE

**Data Scientist**, Capital One Fall 2016

- Pioneered model allowing credit card holders to determine the likelihood of undergoing a fraud transaction using scikit-learn, Redshift, Pandas, and Hive
- Used Terraform and Docker to construct an application deployment framework enabling the public release of features to 700+ mobile users

**Data Engineer**, WatrHub Inc. Winter 2016

- Built document search engine to perform content searching and dataset filtering using Elasticsearch and Kibana
- Used S3, MongoDB, PostgreSQL, and Docker to design and implement infrastructure for terabyte storage of permit documents and utility data
- Wrote 23 web scrapers to optimize wastewater utility data collection from 13 states across the USA
- Designed, developed, and benchmarked production ETL pipelines

**Software Developer**, TD Asset Management Fall 2014 & Summer 2015

- Built financial security modelling tool with real-time and historical stock/bond data-retrieval capabilities using Python, SQL, and Bloomberg API
- Enhanced portfolio optimization tool through the implementation of new cash-flow and key-rate duration constraints
- Developed web tool to automate creation and aggregation of LDI curves

**Co-President**, University of Waterloo DECA Winter 2015 – Winter 2016

- Led team of 20 towards organization of national business and technology conference attended by 150 students and 48 industry professionals
- Raised \$27,550 in sponsorship funding (28% increase year over year)
- Organized networking and competitive events for 237 club members

## PROJECTS

### Bot Engine

- Developed a Python framework enabling non-developers to rapidly prototype and deploy Facebook Messenger bots through a simple JSON specification

### Easy-Budget Messenger Bot

- Designed and developed a Facebook Messenger bot allowing individuals to log and track their income and expenses, while setting personal goals
- Pitched to *Prosper Canada* to use bot as new budgeting application for low-income households

### Bosch Production Line Performance - Kaggle Competition

- Built model using Random Forest classifier to predict at-risk parts of Bosch production line with precision of 89.2%
- Analysed feature set and formulated data cleaning methods to improve pre-processing step for continuous features

### Allstate Claims Severity - Kaggle Competition

- Wrote a regressor to predict insurance claims' severity using Linear Support Vector and Random Forest estimators with ensemble-based feature selection methods

## SKILLS

### Programming Languages

Python, C++

### Analytics and ML Tools

Elasticsearch, Kibana, pandas  
NumPy, scikit-learn, SciPy  
Jupyter, Matplotlib

### Databases

PostgreSQL, MongoDB, MSSQL  
Hive, Redshift, Teradata  
MySQL

### Infrastructure

Docker, Terraform  
AWS – EC2, S3, ELB, EMR

### Web

HTML/CSS, JS, Dojo  
Django, Flask, Apache Nutch

## EDUCATION

### Systems Design Engineering

University of Waterloo  
Class of 2018

## RELEVANT COURSES

Machine Intelligence  
Design Optimization Under  
Probabilistic Uncertainty  
Data Structures and Algorithms

## HACKATHONS

Gift The Code  
ISRM Hacker-thon

## INTERESTS

Podcasts  
Kaggle competitions  
Science fiction novels  
Hip hop music