

Emad Ahmed

3A Systems Design Engineering | emadahmed.me | Github | LinkedIn | emad1997@gmail.com

SKILLS

Languages: Python, JavaScript (ES6), Java, Ruby, C++, Shell Scripting

Technologies: Node.js, Express, Rails, GraphQL, MongoDB, Django, React, Docker

Data: Apache Spark, CardIO, Spark ML, Tensor Flow, SQL, sci-kit learn

EXPERIENCE

SHOPIFY SOFTWARE ENGINEERING INTERN

Winter 2018

- Built tool to import **1 million** customer's data into Shopify via async jobs on Google Cloud Storage
- Reduced import time from **35 hours** to **15 minutes** by optimizing SQL inserts
- Architected new app to manage products across multiple online shops by designing data stores, GraphQL and front-end components
- Built GraphQL errors model to communicate errors from any backend service
- Developed data-intensive React/Redux components to handle product images

PIINPOINT (YC W14) SOFTWARE ENGINEERING INTERN

Summer 2017

- Architected report generation system including back-end API and front-end
- Integrated Points of Interest with routing APIs to get driving/walking distances
- Implemented caching of third-party API responses, reducing load times by **2s**
- Migrated user-uploaded images from database to Amazon S3, cutting response time in **half**

EVERTZ MICROSYSTEMS SOFTWARE DESIGN ENGINEER

Fall 2017

- Built preview feature for digital replay video player from scratch
- Optimized player by limiting database queries and inserts, reducing bandwidth usage by **20%**

TVR COMMUNICATIONS SOFTWARE ENGINEER

Winter 2016

- Reduced load time of TV Channel Page by **50%** through caching
- Added cloning feature for TV channels, reducing time to deploy new builds

PROJECTS

PREDICTING IRREGULAR HEARTBEAT [Python](#), [CardIO](#), [Tensor Flow](#)

Detects atrial fibrillation from ECG signals using the Dirichlet model and CardIO

Built data pipelines to process signals in batches and achieved F1 score of **0.90**

WHAT'S THE MENU [Node.js](#), [Express JS](#), [MongoDB](#), [Google Maps API](#), [Mongoose](#)

Displays crowd-sourced reviews on individual menu items at restaurants

HOUSING VALUE PREDICTION [Apache Spark](#), [Python](#), [Spark MLlib](#), [Spark SQL](#)

Predicts median value of houses based on demographic variables with Apache Spark

Performed feature engineering to improve Linear Regression model using Spark ML

EDUCATION

UNIVERSITY OF WATERLOO BSc in Systems Design Engineering

Expected April 2020 | Relevant Courses: Data Structures/Algorithms, Engineering Design

INTERESTS

Basketball, HealthTech, Distributed Systems, AI, Bioinformatics, Podcasts