


# Emad Ahmed

## EXPERIENCE

**Notable Labs**, Data Science Intern   
Foster City, CA


May 19 – Aug 19

- Built SVM classifier to detect single cells from debris in flow cytometry experiments
- Performed dimensionality reduction with UMAP/t-SNE and achieved 88% accuracy
- Integrated classifier into data pipeline by implementing the scikit-learn estimator API, enabling automated flow analysis

**Shopify**, Software Engineering Intern   
San Francisco, CA


Sep 18 – Dec 18

- Migrated Shopify Kit App (~ 200k merchants) from Amazon Web Services to Google Cloud Platform
- Successfully migrated a 1.5 TB database from RDS to Google Cloud Storage

**Shopify**, Software Engineering Intern   
Waterloo, ON

Jan 18 – Apr 18

- Built tool to import 1 million customers via async jobs on Google Cloud Storage
- Reduced import time from 35 hours to 15 minutes by optimizing SQL inserts

**PiinPoint**, Software Developer Intern   
Waterloo, ON

May 17 – Aug 17

- Architected report generation system including back-end API and front-end
- Integrated Points of Interest with Routing APIs to get driving/walking times

**Evertz**, Software Developer Intern   
Burlington, ON

Sep 16 – Dec 16

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

## RESEARCH (uWaterloo)

**KIMIA Medical Imaging Lab**

Sept 18 – Dec 18

- Researched viability of different implementations for one-class classification problems to classify malignant and benign kidney whole slide images
- Built data pipeline using OpenSlide to process images with tiles and implemented various algorithms for Positive Unlabeled Learning

## PROJECTS

**Commute Time Predictor** Python, pandas, Matplotlib

- Recommends departure time for commuters based on optimal route & weather
- Built decision tree model from scratch using pandas and achieved 83% accuracy

**Custom Neural Network Framework** Python, NumPy

- Implemented fully connected neural networks from scratch such as autoencoders and multi-layer nonlinear networks using backpropagation & gradient descent

**What's the Menu** Node.js, Express, MongoDB, Google Maps API

- Displays crowd-sourced reviews on individual menu items at popular restaurants

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## Education

University of Waterloo

Systems Design  
Engineering

Graduating April 2020

## Skills

### Data

Keras

TensorFlow

Scikit-learn

Matplotlib

flowCore

OpenSlide

NumPy

SQL

### Languages

Java

Python

Ruby

JavaScript

C++

### Tools

Google Cloud

AWS

Rails

React

Redux

## Interests

Health Tech

AI

Social Impact Tech

Podcasts

Distributed Systems

Basketball