

Emad Ahmed

EXPERIENCE

Notable Labs, Data Science Intern 
Foster City, California


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, California


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, Ontario

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, Ontario

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, Ontario

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

Custom Neural Network Framework Python, NumPy

- Built modular framework to implement custom autoencoders from scratch using backpropagation & gradient descent
- Optimized performance using regularization, dropout and batching

Malaria Detection from Blood Smears Keras, scikit-learn, matplotlib

- Classifies Malaria from blood smear images, an alternative to Rapid Diagnostic Tests
- Utilized ResNet architecture along with data augmentation to optimize model

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