RAFAEL BARASH

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Education

B.S. in Computer Science **09/2016 – present**
University of Minnesota Twin-Cities, Minneapolis, USA

GPA: 3.49/4.0
Relevant Coursework: Algorithms & Data Structures II. Program Design and Development. Machine Architecture. Applied Linear Algebra. Multivariable Calculus. Intro to Statistics. Sequences, Series and Foundations.

Technical Skills

Languages

Python
JavaScript
Java
C
OCaml

Frameworks and Libraries

React.js
Materialize.css
TensorFlow
Django

Work Experience

Software Engineering Intern **06/2018 – 08/2018**
Optum - UnitedHealth Group, Minneapolis, USA

- Streamlined communication between business analysts and developers by creating an in-browser Gherkin editor which automatically updates CA Agile Central for all users.
- Developed view logic in React on top of a SpringBoot backend and Docker container.
- Followed modern Agile and ATDD practices using CA Agile Central, Jenkins, and Cucumber.

Full Stack Developer **10/2017 – present**
Humphrey School of Public Affairs, Minneapolis, USA

- Improved collaboration between a network of researchers by building a website hosting descriptions and contact information for open-access urban datasets and models.
- Reduced time spent searching for relevant datasets by integrating data-querying and full-text search features.
- Automated dataset submission and maintenance by connecting a submission form directly to the database and building an admin portal for maintainers.

Projects

Diabetes Risk Dashboard Web App **07/2018**
Optum Hackathon Project

- Full-stack web app that holds patient health information and runs patient data as features through a machine learning model to predict diabetes risk in real time.
- Created machine learning model with TensorFlow DNN_Classifier.
- Frontend created in React.js, graphed risk as a function of each feature using Chart.js
- Wrote custom API to serve TensorFlow model using Python and Flask

Machine Learning March Madness **03/2018**
Personal Project

- Predicted winner of march madness games using TensorFlow machine learning model.
- Achieved 0.55 log loss and 72.4% prediction accuracy with basic linear classification using seed difference, improved to 0.45 log loss and 74% with neural network model.
- Trained models with regular season and tournament data from 2003-2017.

Planet Wars Strategy **12/2017**
School Project

- Ranked 16th out of 125 engineers with Java strategy to take over the solar system.
- Built strategy over legacy code to visualize bot in simulation.
- Increased code efficiency by implementing multiple data structures including a HashMap and PriorityQueue.