

# RAFAEL BARASH

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## Education

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### **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. Advanced Programming Principles. Machine Architecture. Applied Linear Algebra. Multivariable Calculus. Discrete Structures.

## Technical Skills

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### Languages

Python

JavaScript

Java



### Frameworks and Libraries

React.js

TensorFlow

Django



## Work Experience

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### **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 Development** 04/2017 - present

*Humphrey School of Public Affairs, Minneapolis, USA*

- Improved collaboration between a network of international 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

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### **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.