Aayush Shah

University of Waterloo · 2B Computer Science

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Skills

- **Programming:** C++ · Python · Javascript · Scheme · Bash · SQL
- **Tools and Frameworks:** Node.js · PostgreSQL · Backbone.js · Angular.js · MongoDB · Git

Work Experience

- **Software Developer Co-op · Hubdoc Inc.**   Aug 2016 - Dec 2016

  Hubdoc is a startup that automates document management and collection for accountants.   Toronto, Ontario

  - Developed an **analytics dashboard** using **Express** and **Backbone** to visualize trends in growth metrics and bugs.
  - Optimized PostgreSQL schema to reduce load and allow efficient querying of multi-million row data collection.
  - Brought down API response times from **9 to 4 seconds** by migrating internal metrics data to the new schema.
  - Prototyped a machine learning model using scikit-learn to classify incoming user emails into predefined Zendesk labels with **over 80% accuracy**, now a full-time project weekly saving multiple man-hours for the Sales team.
  - Built and maintained 100+ web scraping microservices for fetching financial documents for 8000 monthly users.
  - Improved onboarding time for new developers by taking the initiative to document large sections of the codebase.
  - Primarily worked with: Node.js, Backbone.js, PostgreSQL and Git.

Projects

- **Raytracer** | 🐙 | C++

  A 3D rendering engine using the raytracing technique.
  - Implemented features like anti-aliasing, diffuse lighting and defocus blur.
  - Sample rendered images: **goo.gl/SKHwoM**

- **Fittr** | 🐙 | Node.js · MongoDB | HackHarvard 2016

  An iOS application to help people find ideal gym partners.
  - Wrote the backend API for the app, generating recommendations for partners based on proximity and weight.
  - Simulated a Tinder-like algorithm for anonymous matching of users.

- **Chamber Crawler 3000** | 🎮 | C++

  A Rogue-like RPG game.
  - Designed various types of enemies, usable items and special characters, leveraging object oriented design.
  - Used a 4 way flood-fill algorithm to generate in-game maps and randomized spawning of characters and items.

- **Genie** | 🐙 | Node.js · Simple-git API

  A command line interface for performing complex git tasks with minimum commands.
  - Designed a convenient interface to squash commits, initialize and manage repositories.

Activities

- **Blue** rated competitor on TopCoder algorithm contests, among **top 20%** globally.
- **Top 13%** globally on HackerRank's rated contests, **top 10%** on LeetCode's weekly contests.
- Won **bronze** in HackerRank's "Week of Code 26" week long programming contest.
- Open source contributor for OpenMRS, contributing bug fixes for medical software used in developing countries.

Education

- **University of Waterloo** · Bachelor of Computer Science   Sep 2015 - May 2020
  - Major GPA: **3.8/4.0** · Dean's Honours List (Spring 2016) · President's Scholarship (2015)