Arash Rai

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SKILLS

LANGUAGES
Python •C •C++ •PHP
Java •JavaScript •HTML •Bash
CSS •Scala •Mathematica

TECHNOLOGIES:
Git •Vagrant •AWS •Apache
MySQL •Facebook/LinkedIn
APIs •AngularJS •Node
MongoDB •Linux

SOCIETIES

MATHCAMP ALUMNUS:
Attended a summer program for mathematically gifted students in Portland, Oregon.

SHAD FELLOW:
Completed an engineering entrepreneurship program at the University of Saskatchewan.

VOLUNTEER

- Run for Water
- UWaterloo Open House
- Kiwanis Key Club
- Engineering Shadow
- Abbotsford Food Bank
- We Day Volunteer
- Abbotsford Canada Day

EDUCATION

UNIVERSITY OF WATERLOO
Candidate for Bachelor of Software Engineering
Expected May 2020

INTERESTS

- PC Gaming
- Musical Theatre
- Alogrithms/Math
- Movies
- Travelling
- Science Fiction Novels
- Dance

EXPERIENCE

SPROUT | Full Stack Developer
May 2016 - September 2016 | Toronto, ON, Canada

- Maintained and optimized **AWS EC2**, **Redis**, **SQS**, **S3**, and **RDS** for Sprout's web and mobile platform.
- Oversaw weekly deployment process and parallelized deployment **bash** scripts for increased speed (**7x** faster) and security (more informative console outputs).
- Designed and began implementation of a plan to transition data from **MySQL** to **MongoDB** for **600%** faster leaderboard calculations.
- Transitioned features from **LAMP** to **MEAN** stack technologies and did general bug fixing for all technologies in both stacks.

BITLIT MEDIA INC. | Backend Developer
July 2015 - September 2015 | Vancouver, BC, Canada

- Wrote a creative and efficient algorithm in **Python** that assigned content describing tags to collections of books.
- Optimized user experience by factoring user data into the algorithm so that each user would see tags specifically catered to their interests.

PROJECTS

PROJECT EULER

- Solved over 125 math/programming problems using **Python** and **C++** placing in the **top 1%** of over 633,000 Project Euler users.
- Utilized techniques such as **dynamic programming**, **memoization**, **recursion**, and **optimized brute force** in order to solve problems as efficiently as possible.
- Implemented algorithms/functions such as **Miller-Rabin primality testing**, **Munkres/Hungarian**, **modular binary exponentiation**, **A*/Dijkstra's** and more to facilitate problem solving.

JOB MATCHMAKER

- Wrote a scraping algorithm using **Python** to obtain thousands of job postings from LinkedIn.
- Implemented a function that takes in a plaintext resume as input and produces a list of jobs for which the user would be an excellent candidate.

THE BEAT 94.5 FM PREDICTOR

- Set up a collection of **Python** scripts to periodically scrape a radio station's song history and song metadata from YouTube.
- Wrote an analytical algorithm that predicted what song would be played next based on all the data I had collected.

AWARDS

2015 University of Waterloo President's Scholarship of Distinction
2015 Grade 12 Provincial Scholarship Award (BC)
2015 University of Waterloo Euclid Contest School Champion
2015 University of the Fraser Valley Math Contest Gold Medalist
2015 Abbotsford Community Foundation Main Chance Scholarship