ABHIJITH RAMALINGAM

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SKILLS

Languages:
Python, Java, JavaScript, C/C++, Ruby, C#

Web:
Angular, Bootstrap, jQuery, Rails, Django, MySQL, PostgreSQL, MongoDB, Node.js, Socket.io

Data Analysis:
R, Matlab, Machine Learning, Numpy, SciPy, Matplotlib, Scikit-learn, D3.js

Tools:
Git, SVN, RabbitMQ, LINQ, Powershell

Testing:
Jasmine, Karma, Selenium

Embedded:
PLC, FPGA, Keil, Arduino

LEADERSHIP

Networking Director
Led the organization and marketing of a student-alumni networking event, boosting attendance by 250%.

Residence Ambassador
Encouraged high school students to join Waterloo by giving guided residence and campus tours

COMPETITIONS

Capture The Flag 1 & 2
Hack The North 2015
Completed a series of programming challenges using Python. Placed among top five contestants.

EDUCATION

University of Waterloo
2B Mechatronics Engineering
Graduating May, 2018

WORK EXPERIENCE

International Financial Data Services
R&D Developer
Toronto, ON
Spring 2015

- Developed features for a dataset reducing engine using Hadoop and Rails
- Built a GUI in Python which uses classification algorithms to authenticate clients based on data streamed from wearables
- Developed an image viewer with Node.js , Socket.io and Bootstrap to boost user productivity with features like OCR and real-time heatmaps

HubHead
Test Developer
Markham, ON
Fall 2014

- Detected bugs by managing automated test suites on a Jenkins server
- Performed end to end and unit tests on a cloud product by writing browser automation scripts using Angular.js ,Protractor and Selenium
- Engaged in the SDLC using an agile approach to build a data quality solution

Protecode
Jr Developer & QA
Ottawa, ON
Winter 2014

- Downloaded over 120,000 projects into a MySQL database from websites like Github and SourceForge by writing web crawlers in C#
- Optimized SQL queries of an internal data warehousing tool in C# which lead to a 25% reduction in project processing time

PROJECTS

Market Simulator
Developer
Sept 2015

- Developed a Python program that accepts trade orders for stocks at past dates to calculate profit using data from Yahoo Finance API.
- Generated trade orders based on stock price volatility using Bollinger bands

Path Follower
Embedded Developer
Oct 2015

- Soldered and configured sensors and motors onto a PCB creating a small robot.
- Tested sensors using oscilloscope, signal generator and multimeter.
- Programmed the robot in C to follow a path using magnetic and light sensors

Keil Projects
Embedded Developer
Oct 2015

- Developed a C program for a Keil microcontroller to dynamically allocate memory in O(1) time.
- Implemented quick sort using a multi-threaded architecture which included priority tasks and semaphores.

Distance Sensor
Algorithms Developer
March 2015

- Calibrated an infrared sensor using Arduino and Python to fit a curve to predict the distance from an object.
- Used machine learning algorithms like Nearest Neighbour Search and other statistical technqiues to improve accuracy to 0.15 cm

Crib
Web Developer
June 2015

- Built a chat app with a realtime poll for large groups of students to discuss housing options, implemented using Node.js and Socket.io
- Developed entirely in 24 hours as part of AngelHack Toronto 2015

Airless Tire
Analyst

- Used Solidworks, MATLAB and ANSYS to design a CAD model of an airless tire and simulate stress deformations across terrains

Noise Filtering
Developer

- Removed noise from audio clips using signal filters made in MATLAB
- Accurately reported the number of peaks in the filtered audio clips.