Abhijith Ramalingam

WORK EXPERIENCE

Distributed Systems Engineer
Wave Accounting
Toronto, Winter 2016

Wrote front end components in ES6, React, Immutable.js and Redux.
Developed and shipped scalable, fault-tolerant backend services for the accounting product with Python, Django, Redis and Message Queues.
Gained experience in TDD, Event Sourcing, CQRS and Domain Modelling.

R&D Developer
IFDS Group
Toronto, Ontario
Spring 2015

Wrote features for a dataset reducing engine using Hadoop and Rails.
Developed a GUI in Python which uses classification algorithms to authenticate clients based on data streamed from wearables.
Built a prototype image viewer with Node.js, Bootstrap and websockets.

Test Developer
HubHead
Toronto, Fall 2014

Wrote end to end and unit tests for a cloud-based data quality product using Angular.js, Protractor, Karma and Selenium.
Detected bugs by running automated test suites on a Jenkins CI server.

Junior Developer
Protecode
Ottawa, Winter 2014

Downloaded over 120,000 projects into a MySQL database from websites like Github and SourceForge by writing web crawlers in C#.
Optimised SQL of a data warehousing GUI, increasing throughput by 25%.

PROJECTS

Developer
Machine Learning Experiments
Feb 2016 - Present

Wrote programs using Python, Numpy, Scikit-learn, Matplotlib and Pandas to perform classification and regression tasks on online datasets.
Developed an understanding of methods like K Nearest Neighbours, SVMs and Neural Networks and their applications in solving real life problems.

Digital Signals Processing
Audio Transcriber
Dec 2015

Removed noise from audio clips using signal filters made in MATLAB.
Used frequency analysis to transcribe classical piano pieces into sheet music.
Resynthesized audio from transcription and applied statitical analysis techniques to compare original and resynthesized signal.

Embedded Systems Engineer
Keil Projects
Oct-Nov 2015

Wrote a game in C for a Keil microcontroller that simulates bouncing balls on a LCD screen. Used a multi-threaded architecture, semaphore locks and hardware interrupts to interface with peripherals.
Developed a C program to dynamically allocate memory in O(1) time.

Hardware Design
Path Follower
Sept-Nov 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.

Data Analyst
Distance Sensor
March 2015

Calibrated an infrared sensor using Arduino and Python to measure distance.
Used machine learning algorithms like Nearest Neighbour Search and Polynomial Regression to reduce measurement uncertainty to 0.15 cm.

Python Developer
Market Simulator
Sept-Dec 2014

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

SKILLS

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

Web: HTML/CSS, jQuery, React, Rails, Django , Node

Data Analysis: R, Matlab, Numpy, Scikit-learn

Other: Hadoop, Spark, PostgreSQL, MongoDB, RabbitMQ, Redis

Testing: Jasmine, Selenium

Embedded: Keil, Arduino

LINKS

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www.abhijith.info
github.com/Abhijith1995

EDUCATION

University of Waterloo
3A Mechatronics Engineering
GPA: 84%, Graduating May 2018

COURSEWARE

Machine Learning
Andrew Ng | Coursera

Computational Investing
Tucker Balch | Coursera

Intro to AI
Sebastian Thrun | Udacity