Ashwin Jose Poruthukaran

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SUMMARY

CS Graduate student with 2+ years of experience in software development, seeking full-time positions starting May 2020.

EDUCATION

MCS, Master of Computer Science Graduating May 2020
Arizona State University, Tempe, AZ 3.70/4.00 GPA

B.Tech, Computer Science 2016
Cochin University of Science & Technology, Kochi, Kerala, India 8.57/10.00 GPA

TECHNICAL SKILLS

Programming: Java, C++, C, Python, ABAP, Shell Script, R, SQL, HTML, JavaScript, CSS
Libraries & Frameworks: Boost, STL, BCryptGen, JDBC, Swing, Hadoop, TensorFlow, Django, ReactJS, ExpressJS, NodeJS, D3 JS, Docker
Databases: MySQL, SQLite, MongoDB, Postgres
Operating Systems: Linux, Windows, Android, Mac OS, ROS
Other: SAP ECC, MATLAB, Microsoft Office Suite, Adobe Creative Suite

STUDENT TECHNICAL EXPERIENCE

Research Aide, Ira A Fulton Schools of Engineering, ASU February 2020 – Present

- Currently working as a Research Aide under Professor Jnaneshwar Das at School of Science and Earth Exploration.
- Developing online tools using Django, Docker, Computer Vision and Deep Learning to annotate, train neural networks and further research in multiple domains.
- Currently involved in developing tools to study craters on the lunar surface using data obtained from Lunar Reconnaissance Orbiter.

PROFESSIONAL EXPERIENCE

Business Technology Analyst, Deloitte USI, Bengaluru, India August 2016 – July 2018

- Developed customized SAP ERP solutions to suit client requirements. Optimized pre-existing solutions to enhance performance on SAP ECC 4.6+. Identified and implemented SAP ABAP modules to help make client workflows faster and more efficient.
- Worked across various SAP ERP modules including SD, MM, FICO, HRM.
- Worked extensively on relational databases, using SQL and ABAP to optimize CRUD operations.
- Developed an incident tracking system over Microsoft SharePoint, replacing manual incident tracking using excel sheets and helped save close to 4 hours per teammate, weekly.
- Deployed shell scripts to migrate files and data from traditional data storage systems to SharePoint, minimizing time and effort in data consolidation.

iOS Developer – Intern, QBurst Technologies, Kochi, India May 2015 – June 2015

- Developed an Apple watch application to improve productivity by tracking the user's physical activity and vitals while promoting healthy practices.
- Developed an iOS mobile application to work alongside the Apple Watch app and provide real-time statistics.

TECHNICAL PROJECTS

Driving Companion – Sleep detection from heartrate using Machine Learning

- Developed an Android application that integrates seamlessly with Fitbit smartwatches to continuously monitor heartrate and detect drowsiness while driving using a combination of ML models like KNN, LR and SVM. The application also identifies driving activity automatically and even offers location-based coffee shop suggestions.
- Technology: Android, Java, Fitbit SDK, Google Maps SDK, Python, Pandas, Scipy, Flask

Advanced Encryption Scheme(AES)

- Developed a C++ application that implements basic AES-128,192 and 256 with a CBC mode and PKCS7 padding. Considering timing and cache attacks, bit slicing was also implemented to improve resistance.
- Technology: C++, BCryptGen API

SunFit – Smart Calorie Tracking with Fitbit

- Developed an Android application that integrates seamlessly with a user's Fitbit account and allows the user to easily update calorie intake for meals based on menu data scraped from ASU dining hall website data.
- Android, Java, Fitbit SDK, Google Maps SDK, Python, Flask.

Distributed Working environment

- Developed a distributed desktop application, running on a 5-node Hadoop cluster, to help enhance sharing and collaboration among students for projects. This application comprised a custom file browser, inbuilt chat, and desktop notification mechanisms and leveraged network protocols to provide a uniform experience over LAN.
- Technology: Hadoop, Java, NodeJS, JavaScript, HTML, CSS

Drone recovery using UAV

- Developed an application as part of the 2019 CPS-VO UAV Challenge that allows a UAV to autonomously search through a terrain, identify objects and assist in the recovery of previously lost drones.
- Technology: Python, ROS, OpenCV, MavLink, MavROS, Gazebo, Multi-UAV Control.

Traffic flow prediction with ML

- Developed an application that predicts the flow of traffic for future dates based on temporal, spatial and other external features like weather conditions using ExtraTreesRegressor model. The application performed with an RMSE of under 16%, which was comparable to that of results produced by deep learning algorithms.
- Technology: Python, Scipy, Numpy, Pandas, Scikit-learn

Interactive Data Visualization on Yelp Reviews

- Developed a D3.js based web application to provide an interactive visualization of restaurants and other services on Yelp with the help of insights gained from sentiment analysis on user reviews and text mining.
- Technology: HTML, CSS, JavaScript, D3.js, Python, Scipy, Pandas.

Identification of Eating & Non-Eating Activities from armbands using ML

- Developed a MATLAB application to process armband sensor data, extract relevant features and apply appropriate dimensionality reduction using PCA. The application applies a variety of models like SVM, Logistic regression, KNN etc. to distinguish between eating and non-eating activities and compares them, with the accuracy averaging around 85%.
- Technology: MATLAB

Location based weather extension for Chrome

- Developed a browser extension for Google Chrome using Node JS and React JS. This extension fetches weather updates based on a user specified interval using OpenWeatherMap API. The application can also use location services to identify location automatically while also supporting weather updates based on user specified locations.
- Technology: HTML, CSS, JavaScript, Node JS, React JS, OpenWeatherMap API

Splitwise client desktop application

- Developing a cross-platform desktop application based on Electron, NodeJS, ExpressJS and ReactJS. This application will serve as a desktop client for the Splitwise application which is currently available as a website or a mobile application.
- Technology: Electron, NodeJS, ReactJS, ExpressJS, JavaScript, HTML, CSS, Splitwise API

ACHIEVEMENTS

- First Prize, InfernoHack 2018, WP Carey School of Business, for developing an Alexa Skill and Google Home voice application to allow easy processing of online repeat orders while providing customer insights for the organization at the same time.
- Multiple accolades for outstanding performance at Deloitte USI consulting.

ACTIVITIES

Design Manager, Excel 2015 (National techno-managerial fest of Model Engineering College, Kochi)

- Managed a team of 10+ graphic designers to collaborate on both web and print graphic designs required for organizing a national level techno-managerial fest.

Secretary, Illuminati Quiz Club for 2015-2016 (Govt. Model Engineering College).

- Managed a team of 8 students to organize the 8th edition of the Illuminati Quiz, an annual national-level quiz competition held in Kerala.