

Arpith Thomas Varghese

PROFESSIONAL EXPERIENCE

Zynga, Bangalore

September 2014 – May 2016

Software Engineer

Game Developer for the popular pictiionary game 'Draw Something'

- Developing core gameplay features including a new game mode, in-game achievements & UI in C++
- Added social features, including friends and chat
- Solely worked on a game monetization feature which brought in an addition revenue of \$100k in one month
- Redesigned and redeveloped the entire game for cocos2d-x in C++
- Created tools and scripts for designers that streamline the content creation process in Ruby.

Game Developer for the casual arcade shooter game 'Bubble Safari'

- Worked on the bold beat game-mechanic 'Connected World', aimed at integrating the web and mobile games

ORACLE, Bangalore

Member of Technical Staff

August 2013 – August 2014

QA Engineer in Identity Management Team

- Performed regression, integration, platform and performance testing to certify the stability and usability of Oracle Access Manager
- Worked on automated test cases using Java, Selenium, TestNG and FIAT

EDUCATION

Stony Brook University, Stony Brook, New York

MS Computer Science (CGPA 3.83)

August 2016 – Present

- Relevant Courses: Operating Systems, Artificial Intelligence, Data Science Fundamentals, Big Data Analytics

National Institute of Technology Calicut, Kozhikode, Kerala

B.Tech Computer Science Engineering (CGPA 7.88)

July 2009 – June 2013

- Relevant Courses: Computational Intelligence, Multi-Agent Systems, Computer Architecture, Data Structure & Algorithm, Computer Graphics & Multimedia

SKILLS

Languages: Proficient: C, C++, Python, Ruby on Rails, PHP, SQL
Intermediate: Shell Scripting, Java, Objective C

Tools: Subversion, Git, Xcode, Android Studio

Trainings: Completed Oracle University Trainings on Java, J2EE, PL/SQL and Advanced Development Framework

ACADEMIC PROJECTS

Machine Learning - Music Genre Classification using Deep Learning :

- Scraped 30s preview music clips from Spotify to create a dataset of 3000 songs across different genres
- Extracted mel-spectrum and mfcc coefficients which is used as features to train a convoluted neural network using Google's Tensor Flow

Data Science - Trade Value Analysis in Baseball :

- Players are routinely traded between teams, for other players of presumably equal value. Developed a system to estimate the value of two sides in a trade which was used to find the most lopsided trades in MLB history.

- Predicted the future value of recent trades based on the trade value analysis of past trades.

Operating System - Per Process System Call in Linux :

- Created a linux kernel based system to dynamic addition of system calls using modules.
- Added support to customize and block system calls for each process using system call vectors.

Operating System - Stackable Filesystem in Linux :

- Created a stackable filesystem called trfs, build on top of wrapfs, to support tracing of system call operations to a log file in a consistent manner.
- Created user level program to replay filesystem operations written in the log file and verify log file integrity.

System Security - Malicious Browser Extension :

- Created a browser extension for Google Chrome to steal user information like browsing history, cookies, username and password without user knowledge.
- Added additional functionality to manipulate DOM content of any page to inject custom DOM and run custom javascript code.

Machine Learning - Optical Character Recognition :

- Developed a OCR for Malayalam script using Artificial Neural Networks in C++ using OpenCV.
- Achieved a recognition rate of 80 % and precision and recall values of 0.87 and 0.86 respectively.

Data Compression - Huffman Encoder Decoder :

- Designed and implemented a software for compressing data using huffman coding in C language.

INTERESTS

Machine Learning, Data Science, Artificial Intelligence, Human Computer Interaction

AWARDS & EXTRA CURRICULAR

- * Emerging Star Award in Zynga - March 2015
- * Completed Grade 1 in Guitar from Trinity College London with Distinction