

Ratan George Senapathy

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EDUCATION

University of Southern California(USC), California (GPA: 3.75/4.0)

August 2016 onwards

- ◆ Master of Science in Computer Science
- ◆ Selected Coursework: Foundations of Artificial Intelligence(CSCI 561), 3D Graphics and Rendering(CSCI 580), Algorithms(CSCI 570), Web Technologies(CSCI 571), Professional Writing and Communication for Computer Scientists(CSCI 598), Game Engine Development(CSCI 522), Networked Games(CSCI 523)

Manipal Institute of Technology, Karnataka, India (GPA:8.56/10.0)

July 2012 - May 2016

- ◆ Bachelors in Technology in Computer Science and Engineering
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SKILLS

Languages: Java, PHP, Haskell, C#, C++, Javascript, HTML, CSS, Python, SQL

Libraries/Frameworks: jQuery, OpenGL, REST APIs, AngularJS, Cocos2dx, Scrapy, Cloudsight API, Deepomatic API, ReactJS, Bootstrap

Softwares/Tools: Unity3d, Android Studio, Xcode, Github, Visual Studio, Sublime

Operating Systems: Windows, Ubuntu, Mac OS

Services/Protocols: AWS, Microsoft Azure, REST APIs

WORK EXPERIENCE

Frenzy Dev

January 2017 onwards

- ◆ Increased accuracy of a fashion detection API that takes input images or fashion blogs and returns retail information about similar products in the blog or picture
- ◆ Integrated third party image recognition APIs, cloudsight and deepomatic for image recognition and currently working on migrating it to IBM Watson
- ◆ Co-inventor in patent application

SanDisk India Device Design Centre Ltd, Bengaluru, India

January 2016 - May 2016

- ◆ Designed a python based tracking tool to track invalid executions paths in firmware for more efficient firmware testing
- ◆ Reducing debugging time by 8 to 10 percent

Microsoft IT, Hyderabad, India

June 2015 - July 2015

- ◆ Designed and developed a user friendly data tracking tool to detect whether certain jobs failed while running scheduled jobs on SQL Server and gave a visual representation of the job and database status
- ◆ Reduced number of work hours for searching for various error by around 40 to 50%

Parkyeri, Istanbul, Turkey

June 2014 - July 2014

- ◆ Linking various java libraries together, document various relationships and interactions between libraries and worked on java servlets
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PROJECTS

- ◆ **Tap Color Score - Cocos2dx Game**
 - Programmed a 2d game using cocos2dx game engine for android and simulated reflection from plane surfaces using physics and maths
- ◆ **Pool Crush - Unity3d game**
 - Developed a 3D game based on infinite path generation
- ◆ **Missile Shooter - Unity3d game**
 - Created a 2D game and submitted it for a game jam
 - Coded a targeting system using vector math
- ◆ **Colorful Fish Catcher - Unity3d game**
 - A 2D game designed and submitted it for a game jam
 - It is a clicker based game
- ◆ **Swamp Pets - Unity3d game**
 - A first person shooter game
 - Implemented ray casting, lighting, animations and terrain design
- ◆ **Hunter Island - Unity3d game**
 - A 3d first person shooter game
 - Generated the game terrain through procedural generation
 - Engineered a navigation system for enemies to attack the player
- ◆ **Board Game - AI based game**
 - Made a board game in java using MINIMAX algorithm and Alpha-Beta pruning
 - Worked with various heuristics so as to improve the algorithmic performance
- ◆ **Computer Graphics Engine - C++ based Graphics Engine**
 - Created a basic 3d graphics engine for a class project
 - Programmed frame buffers, model view to screen view conversion algorithms, flat, gouraud and phong shading mechanisms, performed texture mapping both from a texture image and procedurally and devices an antialiasing algorithm
- ◆ **Deferred Shading Project - OpenGL based project**
 - Implemented a deferred shading algorithm as a team project in OpenGL for a graduate class
 - Wrote a paper on it for class
- ◆ **Facebook Search Website - Website**
 - Created a website in php, javascript, jQuery and angularJS and called FB and Google maps API to get details about FB users, places, groups, events and pages and implemented REST APIs for it
- ◆ **Facebook Search App - Android App**
 - Made an android app which uses the above mentioned project's REST API calls to display the results in an android app
- ◆ **Programming Language - A first order logic based programming language**
 - Developed a basic first order logic programming language(FOL)
 - It validates or invalidates queries based on facts given as input
 - Implemented FOL resolution algorithm to perform validation