Ratan George Senapathy

909-735-0445, ratangsenapathy@gmail.com, github.com/ratangsenapathy
www.linkedin.com/in/ratangsenapathy, Portfolio: ratangsenapathy.github.io

EDUCATION

University of Southern California(USC), California *(GPA: 3.75/4.0)* ***2018 Candidate***

- *Master of Science in Computer Science*
- Selected Coursework: Foundations of Artificial Intelligence, 3D Graphics and Rendering, Algorithms, Web Technologies Professional Writing and Communication for Computer Scientists, Game Engine Development, Networked Games

Manipal Institute of Technology, Karnataka, India *(GPA:8.56/10.0)* ***2016***

- *Bachelors in Technology in Computer Science and Engineering*

SKILLS

Languages: Java, PHP, Haskell, C++, C#, Javascript, HTML, CSS, Python, SQL
Libraries/Frameworks: jQuery, OpenGL, 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 ***Jan 2017 - Present***

- Increased accuracy of a fashion detection API that returns information about products pictured in a blog or an image
- Integrated third party image recognition APIs including Cloudsight and Deepomatic for image recognition
- Took initiative the optimise the user experience by reimplementing part of the API to decrease the wait time of the api
- Co-inventor in a patent application for the API
- Currently in charge of the Los Angeles office and is currently collaborating with various teams to release the API into production

SanDisk India Device Design Centre Ltd, Bengaluru, India ***Jan 2016 - May 2016***

- Designed a python based tracking tool to track invalid execution paths in firmware for more efficient firmware testing
- Reduced debugging time by 8% - 10%

Microsoft IT, Hyderabad, India ***June 2015 - July 2015***

- Designed and developed a user friendly data tracking tool in C# and WPF to detect job failure on SQL Server and gave a visual representation of the job and database status
- Reduced number of work hours for searching for various errors by around 20% - 30%
- Took the initiative to design a more detailed graphical report generation mechanism for the tool

Parkyeri, Istanbul, Turkey ***June 2014 - July 2014***

- Linked various java libraries together, documented various relationships and interactions between libraries

PROJECTS

- **Networked Game -** Unity3d game
  - Currently working on multiplayer online first person shooter game for a graduate course
  - Team leader of the project
  - Regularly assign work to each person o the team, review the code and integrate the changes together
  - Working with transport layer protocols instead of the high level api to implement the networking feature of the game
- **Tap Color Score -** Cocos2dx Game
  - Programmed a 2d game using cocos2dx game engine for android and simulated reflection from plane surfaces
  - Took the initiative to teach the team members about how the game engine works and collaborated with them to make the game
- **Missile Shooter -** Unity3d game
- - Created a 2D game and submitted it for a game jam
  - Coded a targeting system using vector math and used it to make missiles home in on the player
- **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 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
  - Lead a team to implement a deferred shading algorithm as a team project in OpenGL for a graduate course