Ratan George Senapathy

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OBJECTIVE

Hard working computer science graduate student who is passionate about game development and has leadership skills seeking to apply my ability in game development position

EDUCATION

University of Southern California (USC), California (GPA: 3.75/4.0) **May 2018 Candidate**
Master of Science in Computer Science
Relevant Coursework: Game Engine Development, Networked Games, 3D Graphics and Rendering, Foundations of Artificial Intelligence, Algorithms

Manipal Institute of Technology, Karnataka, India (GPA:8.56/10.0) **May 2016**
Bachelors of Technology in Computer Science and Engineering
Relevant Coursework: Network Protocols, Distributed Computing Systems, Data Structures using C

SKILLS

Languages: Java, C++, C#(certified), PHP, Javascript, Python, HTML, CSS, Haskell, SQL, MYSQL, TSQL
Libraries/Frameworks: jQuery, OpenGL, AngularJS, Cocos2dx, Scrapy, Cloudsight API, Deepomatic API, ReactJS, Bootstrap
Softwares/Tools: Perforce, Github, Visual Studio, Unity, Android Studio, Xcode,, Sublime, Blender, Maya, Microsoft Office
Operating Systems: Windows, Ubuntu, Mac OS
Services/Protocols: AWS, Microsoft Azure, REST APIs

PROJECTS

Networked Game (Unity) **Aug 2017 - Present**
- Currently the team leader in charge of making a multiplayer online FPS game for a graduate course and regularly assigned work to team members, reviewed the code and integrated changes together
- Working with transport layer protocols for socket programming instead of the high level api to implement the networking component
- Reduced latency by using dead reckoning and is in the process of implementing voice over IP

Hunter Island (Unity) **July 2017 - July 2017**
- Created a FPS shooter game, where tigers attacked you and you had to survive as long as possible or until the time ran out
- Generated entire terrain using procedural generation algorithms and added randomness to every new map generated
- Implemented a navigation system for AI system of the non playable characters (NPCs) to track you down

Computer Graphics Engine (Graphics Engine) **Aug 2016 - Dec 2016**
- Created a basic 3d graphics engine for a class project in visual studio and C++
- 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, wrote an antialiasing algorithm
- Reimplemented the entire system to use deferred rendering as part of a team project using OpenGL and C++

Game Engine Modification (PrimeEngine) **March 2017 - May 2017**
- PrimeEngine is a game engine made by our professor for a graduate course
- Implemented parts of the game engine like bounding volumes, frustum culling, mesh loading in C++ using Visual Studio

Board Game (Java) **Sept 2016 - Oct 2016**
- Created a 2 player board game and created an AI agent that can play the game using MINIMAX and Alpha-Beta pruning algorithms

WORK EXPERIENCE

Frenzy.AI, Los Angeles, United States **Jan 2017 - Present**
Position: Associate
- Currently in charge of the Los Angeles office and is collaborating with various teams to release the API into production
- Working as a full stack developer, took initiative to accuracy of fashion detection API that returns information about products pictured in a blog or an image by 20%
- Integrated cloudsight and deepomatic APIs in PHP and codeigniter framework for image recognition, worked on the company's API to fetch and update data from MYSQL database, set up servers on AWS and Azure and wrote scripts to use S3 storage on AWS
- Currently working there while doing my masters and is an inventor in the patent application for the API

SanDisk India Device Design Centre Ltd, Bengaluru, India **Jan 2016 - May 2016**
Position: Intern
- Designed 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**
Position: Intern
- 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 which reduced number of work hours for searching for various errors by around 20%
- Took the initiative to design a more detailed graphical report generation mechanism for the tool

Parkyeri, Istanbul, Turkey **June 2014 - July 2014**
Position: International Intern
- Linked various java libraries together, documented various relationships and interactions between libraries and wrote java servlets for a 3D online world during an international internship opportunity in Istanbul