# Ratan George Senapathy

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## OBJECTIVE

Hardworking Computer Science graduate student with leadership skills and global experience seeking a challenging position in game development at a leading game development company

## EDUCATION

**University of Southern California (USC), California** (GPA: 3.75/4.00) **May 2018 Candidate**
Master of Science in Computer Science
**Manipal Institute of Technology, Manipal, India** (GPA: 8.56/10.00) **May 2016**
Bachelors of Technology in Computer Science and Engineering

## RELEVANT SKILLS

**Languages** : Java, C, C++, C# (certified), Python, SQL, MYSQL, TSQL
**Libraries/Frameworks** : OpenGL, Unity, Cocos2dx, Adcolony,, Admob, Chartboost
**Software/Tools** : Perforce, Github, Visual Studio, Blender, Maya, Android Studio, Xcode, Sublime, MS Office
**Operating Systems** : Windows, Ubuntu, Mac OS
**Services/Protocols** : AWS, Microsoft Azure, REST APIs

## WORK EXPERIENCE

**Frenzy.AI, Los Angeles, United States** **Jan 2017 - Present**
Position: CTO
- Currently in charge of the Los Angeles office and collaborating with various teams to release fashion detection API into production
- Working as a full stack developer, took initiative to increase accuracy the API that scrapes information about products in a blog 20%
- Integrated Cloudsight and Deepomatic APIs in PHP and CodeIgniter framework and worked with MYSQL
- Set up AWS EC2 instance and virtual machines on Azure and wrote scripts to use S3 storage on AWS
- Currently working here while pursuing my Master's degree
- Inventor in the patent application for the fashion detection 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, Hyderabad, India** **June 2015 - July 2015**
Position: Intern
- Designed a data tracking tool in C# and WPF to detect job failure on SQL Server
- Gave a visual representation of the job and database status which reduced number of work hours for debugging by around 20%

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

## PROJECTS

**Networked Game (Unity)** **Aug 2017 - Present**
- Currently the team leader in charge of making a multiplayer online FPS game, and assigned work to team members, reviewed code and integrated changes
- Working with transport layer protocols to implement the network architecture and implemented event handling over the network
- Reduced latency by using dead reckoning

**Game Engine Architecture (PrimeEngine)** **Aug 2017 - Present**
- PrimeEngine is a game engine made by a graduate course professor
- Implementing parts of the game engine like bounding volumes, frustum culling, mesh loading and physics in C++ using Visual Studio
- Created a navmesh and implemented A* search algorithm to navigate the navmesh

**Hunter Island (Unity)** **July 2017 - July 2017**
- Created a FPS shooter game, where tigers attacked the player who had to survive as long as possible or until the time ran out
- Generated entire terrain using procedural generation algorithms
- Implemented an AI navigation system for the non playable characters (NPCs) to track the player 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/phong shading mechanisms, performed texture mapping both from a texture image and procedurally and wrote an antialiasing algorithm
- Reimplemented the entire system to use deferred rendering as part of a team project using OpenGL and C++

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