Roy Guo

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Education

University Of California San Diego; La Jolla, CA   09/2015-06/2019
Bachelor in Computer Science — Summa Cum Laude Honor

University Of California Berkeley; Berkeley, CA   09/2019-06/2020
Master in Computer Science

Experience

Software Engineering Intern, *TuSimple Technology*; San Diego, CA   10/2017-03/2018
Simulated truck movement for autonomous driving and optimized the collision detection algorithm. Built web interface for the movement simulators. Built NoSQL database for simulation results.

Machine Learning Intern, *Microsoft Research Asia*; Beijing, China   06/2017-08/2017
Worked on Mahjong AI, researched on machine learning approaches used in information-asymmetric games, optimized the current model. Using Qt, built a game log visualizer to trace model's decision making process.

Projects

Front-end Lead, *KillStreak*; Online Multiplayer Battle Arena   03/2019-06/2019
Tools: OpenGL, Visual Studio, Github
Implemented physics engine with mesh collision. Implemented mouse control for character movement. Implemented action prediction when server tick rate is lower than the frame rate. Implemented and designed the user interface. Designed game mechanics and systems, including character skills and in-game economics.

Full-stack, *Teal*; College Student Stress Manage Application   09/2018-01/2019
Tools: MongoDB, HTML/CSS, jQuery, Sketch, Zeplin
Designed the application that brings users mindfulness of stress and guide them to address the stressors. Implemented user database using MongoDB. Implemented user interfaces.

Team Lead, *PeterBook*; Secured Multiplatform Social Network   03/2018-06/2018
Tools: Jenkins, ReactJS, Nginx, Flask, Firebase, NodeJS
As the team lead, responsible for finding user needs, managing progress, and holding weekly meeting with team members. Set up GitHub hook and Jenkins as the conveyor belt for automatic testing and deployment. Implemented data encryption for all data in the private real-time chatting sessions.

Skills

Languages
Proficient: Java, C++, HTML/CSS, JavaScript, Python, Unix
Intermediate: OCaml, C, C#, MATLAB
Tools & Frameworks
Proficient: GitHub, ReactJS, Flask, Nginx, Firebase, MongoDB, Microsoft Azure, Jenkins, Unity3D, Pandas, OpenGL, Visual Studio
Intermediate: VueJS, TensorFlow, NumPy, NodeJS, jQuery, TCP/IP