Shen Huang

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EDUCATION

California State University, Northridge, Northridge, California, USA September 2017 - June 2019 (Expected)
MS in Computer Science
Queens University, Kingston, Ontario, Canada June 2015
BS in Electrical Engineering

SKILLS

Programming Languages: Object-oriented design using **Java**, front-end development with **HTML**, **JavaScript**, backend development with **Go** and **Node.js**. Web testing with **Selenium**. Statistical analysis using **Python/MATLAB**, mobile game development with **Unity-C#**, microprocessor programming with **Arduino**, **C** and **Assembly**.
Computer Science: Data structures, algorithms, computer system architecture, object-oriented programming, operating system, signal processing, data analysis, artificial intelligence (both machine learning and game AI).

WORK EXPERIENCE

Graduate Assistant Starting September 2018
- Assisted the professor with research tasks including code production. Learning about the problem through literature review. Created full-stack projects to collect data. Wrote algorithms in python to preprocess raw data into features from literature review and brainstorming. Analyzed features with data science models.

Software Engineer Internship, CETC Motor July 2013 - September 2015
- Worked on a compiler to support floating point calculation by modifying the lexical and syntax analyzer.
- Added English and Chinese support for help documents.

Electrical Engineer Internship, State Grid Corporation of China July 2012 - September 2012
- Designed and Implemented a Java application to help managing error reports.
- Collaborated with six other engineers to validate the integrity of the communication system between the distribution station and the headquarters.

PROJECTS

Research Works
- Invented and applied a mixture model theorem to improve conventional classification models. The accuracy was improved from 72% to over 90% for the target data set.
- Invented and a statistics theorem and applied it into inventing a new algorithm.
- Implemented the data collection mini-game interface with HTML5 Canvas, backend in both Node.js and Golang. Data preprocessing and analysis was done in Python, WEKA, scikit-learn, MLJAR and Node.js.
- Created a social media page to collect data, tested the social media page with Selenium.

Game Design
- Built multiple games in Unity for mobile platform, utilizing touch screen inputs, accelerometers, gyroscope, cameras and VR developments.
- Built a grid-based underground mining lava run game with procedurally generated level and lava automaton, mobile friendly with many UI design improvements built on easily adjustable custom UI objects.
- Built multiple multiplayer games with HTML5 and Unity front end with C# .NET Framework, Node.js backend. Familiar with Unity LBS, DynamoDB and Buckets in both GCP and AWS. Some games are ongoing.
- Improved complexity of real time algorithms to O(1), including information inside fog of war only available on the server side.
- Implemented AI algorithms such as min-max tree and state machines. Exposed to algorithms such as A* Search, Monte-Carlo search and Deep Q Learning.
- Collaborated with people in other disciplines such as musicians, artists and writers.

Queens ECE Annual Robot Competition, 1st Place
- Designed a slam-dunk robot, code based on Arduino. Robot moves and grabs with servo motors utilizing Pulse Width Modulation. Robot senses the environment through touch sensor and distance sensors, and therefore was designed to have a close loop control system to adjust the speed for optimal performance.

Writer at Medium

Good writing skills and passionate in helping other developers.