**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 2013

* 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.

**Data Science**

* Wrote a k-NN classifier and made modifications to it in Node.js based on a .js k-d Tree. Wrote a BPANN in C# for a Unity game project before Unity ML modules were mature.
* Analyzed research related data with Auto-ML frameworks.
* Familiar with Machine Learning models such as Deep Learning, Ensemble Learners, Instance Based Learners etc. Familiar with Statistical knowledge such as Distributions, Statistical Testing, Evaluation and other analysis.
* Familiar with Data Science related modules in Python such as NumPy, Pandas, TensorFlow sklearn, and data visualization such as matplotlib.
* Writer at Towards Data Science.

**Full Stack Development**

* Created a multi-player game with Node.js back-end and deployed it on personal computer.
* Created an LBS based game in Unity with .NET Framework and Node.js backend. The game was then deployed onto AWS and GCP, exposed to modules such as Elastic Containers, Serverless Computing, Cloud SQL/NoSQL and Cloud AI.
* Programmed a custom backend for a chat platform in Java.
* Made various front-end projects such as games and interactive web contents with HTML/CSS/JavaScript.
* Built a translation chat application with Flutter front-end and Firebase back-end.