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Scott Y. Shi

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Education

UCLA -- Junior in Computer Science October 2014 – June 2018

- **Cumulative GPA**: 3.89
- **Completed Coursework**: Operating Systems, Algorithms, Machine Learning (Coursera)
- **In Progress Coursework**: Artificial Intelligence, Database Systems, Convolutional Neural Networks for Computer Vision (Stanford CS 231n), Machine Learning (Statistics), Programming Languages, Distributed Machine Learning, Linear Models (Statistics)
- UPE Officer Board Member (Computer Science Honor Society)
- ACM Artificial Intelligence Committee Member

Skills

Programming languages: C++, C, Python, SQL, Matlab, R
Computer applications: Bash, Git

Experience

Software Engineering Intern: Bloomberg L.P. June 2016 - August 2016

- Wrote **SQL** packages for **relational databases** to collect multi-table entity and permissions information.
- Incorporated entity dataset into an **autocomplete** engine and created a reusable search bar UI component.
- Produced an offline task to regenerate the autocomplete dataset daily and a separate offline task to maintain the dataset's entries with **real time updates**.

Undergraduate Research: Directed Research under Prof. Miodrag Potkojnak March 2016 - June 2016

- Generated **confidence intervals** predicting the number of expected customers and taxis to appear in smallest regions in any specified time interval using **k-means clustering.**
- Optimized pairing taxi to customer in terms of finding the shortest total distance between all taxi to customer matches within specified time intervals by using **bipartite matching**.
- Shortened taxi distance traveled between service rides by 4x by using this matching technique when compared to original baseline travel times.

Undergraduate Research: UCLA Wireless Health Institute June 2015 - August 2015

- Developed **Matlab** code to utilize NSIM (open source Auditory Neural Network software that measures speech degradation through phone calls) to measure difference in speech utterances.
- Tested validity of NSIM by comparing its results against human perceived results.

Projects

M-N-K Game AI: Self Study June 2016

- Implemented **minimax algorithm** to compute game states with a variable amount of depth.
- Supplemented the minimax algorithm with **alpha-beta pruning** to speed up computation of game states.
- Modified the back end game computation to handle **variable board dimensions** and end game state calculations.

FPGA Character Recognition: UCLA Logic Design Capstone Project May 2016

- Implemented **logistic classifiers** to distinguish four handwritten digits trained with the NMIST dataset.
- Tuned the hypothesis function so it would be able to be **calculated on an FPGA** (no division operations, no sigmoid function, restricted memory).
- Implemented Verilog code to perform predictions on regular and ambiguous inputs (0 and 1 overlapped).