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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), Data Structures
- **In Progress Coursework**: Artificial Intelligence, Database Systems, Recurrent Neural Networks for Natural Language Processing (Stanford CS 224d), 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 Infrastructure - Backend Intern: Bloomberg L.P., New York June 2016 - August 2016

- Worked with the Entity Entitlements Management team to develop autocomplete search for our dataset.
- Implemented a SQL system to collect multi-table entities and permissions from Bloomberg's proprietary relational database to be used as queryable items in the search bar.
- Wrote C++ code to gather entries from my SQL system and encoded in a way that it could be used by the Autocomplete engine in the front end.
- Developed a generic autocomplete searchbar in Javascript with the encoded dataset that could filter out certain query-able items based on the user's permissions level, and jump to that item's description page with the proper viewing and editing permissions.
- Developed an infrastructure procedure to regenerate the autocomplete dataset daily and a separate procedure 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 the smallest k clusters in any specified time interval using k-means clustering**.**
- Optimized pairing of taxi to customer by 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.

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).