Shuze Liu

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Education

Yale University **May 2020**
M.S. , Computer Science
Rensselaer Polytechnic Institute May 2019
B.S. , Computer Science
Cumulative GPA: **4.0/4.0** (Summa Cum laude)

Experience

Alibaba Group June 2019 – Aug. 2019
Algorithm Engineer Intern Hangzhou, China

- Developed a program in **Python** to test the actual performance of twelve convolutional neural networks on the server.
- Implemented ShuffleNet v2 by MxNet in **Python**. Trained this neural network on clothing pictures.
- Achieved 91.8 % accuracy on clothing classification problem by tuning the hyperparameters.
- Developed an **API** for this network to allow the City Brain project to input any size of pictures and get their labels.

Strengthening Blockchain Code to Handle Unexpected Situations May 2018 – May 2019
Undergraduate Researcher Troy, New York

- Designed and developed a decentralized course selection system on the blockchain platform, Hyperledger Composer in **Javascript**.
- Designed a voting mechanism with an action list to handle unexpected situations in blockchain code.
- Augmented this mechanism with generic principles. Created generic **APIs** for incoming blockchain code.
- Implemented a pre-processer in **C++** to parse incoming blockchain code and automatically decorate the chaincode with the above design.

Publication

- **Shuze Liu**, Farhad Mohsin, Oshani Seneviratne, Lirong Xia. Strengthening Smart Contracts to Handle Unexpected Situations. **Published on IEEE International Conference on Decentralized Applications and Infrastructures**. [Link] [PDF]

Selected Projects

Artificial Intelligence in Pac-Man (Python) Jan. 2019 – May 2019

- Developed informed search algorithms to help Pacman find food dots. Designed heuristics to increase the efficiency.
- Abstracted and implemented game states in multi-agent Pac-Man games. Developed Minimax and Expectimax algorithms to optimize scores.
- Developed q-learning, an reinforcement algorithm to learn the optimal strategy for Pac-Man.
- Implemented observe and elapseTime functions to make inference of ghost positions by Bayesian Networks.

GoSki (iOS app) Jan. 2019 – May 2019

- Developed an iOS app to gather ski mountain informaiton and to provide tutorials for skiers.
- Managed team to follow Agile software development principles. Ensured on-time delivery.
- Wrote corresponding documentation for each Sprint and elease.
- Designed database schema in Firebase to store users' accounts and summarized mountain information.

Skills

- Programming Languages: Proficient in Python, C, C++, Java, Javascript, SQL, Pascal, Prolog, Scheme.
- Frameworks: TensorFlow, MxNet, Pytorch, Hyperledger Composer, LaTex, Hugo.

Teaching & Advanced Courses

Undergraduate **Teaching Assistant**: Intro. to Algorithms (Spring 2019), Intro. to Logic (Fall 2018)

Programming Intensive Courses: Software Engineering, Software Development & Documentation, Operating Systems, Principle of Software, Programming Languages, Principle of Compliers, Intro. to Database Systems.

AI & Theory Courses: Deep Learning, Intro. to Artificial Intelligence, Graph Theory, Machine Learning in Blockchain, Computability and Logic, Advanced Computer Algorithms.