Jiayi Yuan

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SKILLS

Programming
Python
Java
Javascript
C/C++
Matlab/Simulink
Unix
HTML/CSS
SQL/NoSQL
R

Data Analytics and ML
PyTorch
OpenCV
Tensorflow
Scikit-learn
NumPy
Matplotlib
Pandas

Others
AWS
Microsoft Azure
Docker
Git
Arduino
Django

Languages
Mandarin
English
Spanish

COURSEWORK

Machine Learning
Distributed Systems
Computer Systems
Data Structures
Algorithms Analysis
Software Engineering
Neural Data Analysis
Neural Computations
Cognitive Robotics
Theoretical Computer Sciences
Human Information Processing and Artificial Intelligence

EDUCATION

Carnegie Mellon University, Pittsburgh, PA — August 2018-May 2021
Bachelor of Science in Neuroscience and Computer Science
GPA: 3.5/4.0 (University Honor)

EXPERIENCE

Amazon Alexa, Seattle, WA
Software Development Engineer I — *July 2021 - Present*

- Developed and launched Alexa Together, a subscription service that offers elder care and urgent response using Alexa devices.
- Worked as a part of the on-call rotation, responded to customer-impacting issues 24/7 after investigating the root cause and diving deep into the code source, pushed the corresponding fix and reported to the Alexa team

Technology for Effective and Efficient Learning Lab (TEEL Lab), Pittsburgh, PA
Machine Learning Course Development Intern — *December 2020 - June 2021*

- Developed the in-progress **AI practitioner** online course infrastructure that enables project-based learning through auto-graded projects that provide contextualized feedback.
- Incorporated social learning reflection and feedback cycles for each project, timed and role-based online group learning exercises, and rubric-driven peer code-review activities.

PROJECTS

VQA-VizWiz Challenge — *October 2020 - December 2020*

- Improved the peak accuracy and efficiency of a baseline algorithm for **VQA-VizWiz Challenge** in **PyTorch**, a project designed to answer visual questions asked by the blind people.
- Implemented an **optical character recognition (OCR)** component to the feature extraction, and experimented with various architecture design choices in feature abstraction and question processing using **ResNet-152, Vision Transformer, LSTM and GRU**. Reduced the training time by **30%** with **57.81%** peak validation rate.

Partial Cube Detection — *March 2020 - May 2020*

- **Designed, with team, an open-source computer vision two-class classifier** with **two-layer convolutional neural network** that allows a mobile robot to recognize a partial cube within the camera frame, and turn to face the cube, and raised the final cross validation rate to **98.75%**

Texas Hold'em Player AI 'Jaja' — *September 2019 - December 2019*

- Designed **a Texas Hold'em Player AI using Matlab** that can **learn the playing patterns of other players from past trials and recognize bluffing behaviors** and then **devise the corresponding strategy** to achieve an overall 85% winning rate.
- Placed the 1st in the final Texas Hold'em AI tournament.