Yuchen Sun

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EDUCATION

EXPERIENCE

Microsoft Research Asia

06/2016 - 07/2017

Research Intern at Software Analytics Group

- Used several binary classification algorithms, SVM, Random Forest, XGBoost, to predict hardware failures on the cloud platform
- Transformed binary classification into Learning to Rank problem since online hardware failure prediction is extreme imbalanced problem and applied LambdaRank and LambdaMART for solving the problem
- \circ Proposed an neural network architecture based on Wide & Deep Learning and deployed a pipeline on Microsoft distributed platform Cosmos for feature extraction and training
- $\circ~$ Improved the pipelines of several projects on time and space complexity

PROJECTS

Auto-Driving using Computational Intelligence

07/2018

King's College Londonn | JavaScript, HTML Canvas, REINFORCEjs

- Implemented a Web-based platform to simulate several traffic scenarios, with support for controlling an car by either human player or computer player
- Trained an agent for driving itself autonomously in different traffic scenes with Deep Q learning and Deterministic Actor-Critic algorithm

Shakespeare or Fakespeare

11/2017

King's College London | HTML, Python, Flask, Keras

- Designed the UI of Web page for comparing real verses written by Shakespeare and fake verses generated by Char-RNN
- o Implemented the server by Flask to pass fake verses

Flappy Bird AI based on Deep Reinforcement Learning

01/2017

Beijing University of Technology | Python, OpenCV, Keras, Tensorflow

- Designed the network architecture to map raw pixel input to actions with Tensorflow
- o Implemented Deep Q learning from scratch, with prioritized experience replay

Online Demonstration of Famous Paintings of the Palace Museum

03/2016

Beijing University of Technology | JavaScript, HTML

• Contributed in one of the famous painting "Twelve Beauties of Price Yong"

Honors

"Star of Tomorrow" Title (For MSRA interns with outstanding performance)	2017
Brown Medals of ACM-ICPC and CCPC regional contests	2016
First Prize in China University Computer Games Championship(Game of the Amazons)	2015
First Prize in China Undergraduate Mathematical Contest in Modeling	2014

ACTIVITIES

Co-founder of Programming Club "Source Code"

2014.9 - 2017.1

Beijing University of Technology

o Communicated with universities in Beijing and hold lectures on algorithms for freshmen.

TA of C-Programming Course

2016.1 - 2016.6

Beijing-Dublin International College, Beijing University of Technology