Yuchen Sun

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EDUCATION

University College London London, UK **MRes** in Computational Statics and Machine Learning 09/2019 - 09/2020Courses: e.g., Probabilistic and Unsupervised Learning, Approximate Inference and Learning in Probabilistic Models, Applied Machine Learning, Applied Bayesian Methods King's College London London, UK **MSc** in Advanced Computing | Pass with Distinction 09/2017 - 09/2018**Beijing University of Technology** Beijing, China **Bachelor** in Computer Science | GPA: 3.7/4.0 09/2013 - 07/2017

Experience

Microsoft Research Asia

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
- Proposed a neural network architecture based on Wide & Deep Learning and deployed a pipeline on Microsoft distributed platform Cosmos for feature extraction and training
- Improved the pipelines of several projects on time and space complexity
- Multiple projects were accepted by the top conferences (KDD, ESEC/FSE) and working in production

Chinese Academy of Sciences

Research Intern at Institute of Software

- Proposed a graph-to-sequence neural network to find the solution of the Boolean satisfiability problem
- Proposed a strategy to mitigate the issue of assignment dependency in Boolean satisfiability problem.

Projects

Learning to Learn Opponent Learning 12/2019University College London | Python, PyTorch • Proposed a new approach to model the behavior of opponents in non-stationary settings • Implemented the proposed algorithm and the corresponding algorithms for comparison, including multiple reinforcement learning algorithms, REINFORCE, A2C, TRPO, PPO and naive behavor cloning • Submitted to IJCAI 2020 Auto-Driving using Computational Intelligence 07/2018King's College London | 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
- Implemented the server by Flask to pass fake verses

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

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06/2016 - 07/2017

03/2019 - 08/2019