Qingfeng Lan

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EDUCATION

University of Alberta **Sep 2018-Present**

- Master of Science (Thesis-based) in Computing Science
- Field of interest: Reinforcement Learning, Representation Learning, Lifelong Learning
- Overall GPA: 4.0/4.0

University of Chinese Academy of Sciences (UCAS) **Sep 2014-July 2018**

- Bachelor of Engineering, major in Computer Science and Technology, minor in Physics
- Overall GPA: 3.78/4.0 Subject GPA: 3.85/4.0 Class ranking: 6/61

University of Oxford **Oct 2017-Mar 2018**

- Visiting Student in Department of Computer Science, St Edmund Hall
- Courses: Computational Learning Theory, Computational Game Theory(audit), Computer-Aided Formal Verification, Principles of Programming Languages, Computer Security, Lambda Calculus and Types, Quantum Computer Science

RESEARCH AND PROJECT

Investigating the utility of Partial updating of NNs using Coordinate Descent **Jan 2019-Present**

Institution: University of Alberta
Advisor: Martha White

- Working on

Reducing Selection Bias in Counterfactual Reasoning **Sep 2018-Dec 2018**

for Estimating Individual Treatment Effects

Institution: University of Alberta
Advisor: Negar Hassanpour, Russ Greiner

- Proposed a new graphical model which includes the latent variables of the observed features
- Explicitly removed selection bias by separating the learned representations of features into parts
- The new algorithm achieved state-of-the-art performance for outcome prediction

The Application of Variational Autoencoder in POMDPs **Jan 2018-March 2018**

Institution: Whiteson Research Lab, University of Oxford
Advisor: Dr. Maximilian Igl

- Learned Variational Autoencoder and Partially Observable Markov Decision Processes (POMDPs)
- Read codes of a project for the application of variational autoencoder in POMDPs

A Deep Top-K Relevance Matching Model for Ad-hoc Retrieval **July-Sep 2017 && March-April 2018**

Institution: Institute of Computing Technology (ICT), Chinese Academy of Sciences (CAS)
Advisor: Prof. Jiafeng Guo

- Proposed a deep relevance matching model for ad-hoc retrieval problem
- Leveraged Top-K pooling to capture the details of interaction scores, applied term gating network to control the contributes of each query term to the final matching score
- The sort performance was significantly improved and our model outperformed other state-of-the-art deep models

Triplet Extraction **Dec 2016-Jan 2017**

Institution: ICT, CAS
Advisor: Prof. Ping Luo

- Developed a deep learning model to extract correct triplets (time, attribute, value) from real financial documents
- Vectorized sentences by word embedding, applied LSTM to extract information of possible triplets, utilized an argmax function to pick out plausible triplets
- The precision was 0.91 on test set; the model was employed to check financial reports and had successfully found out many wrong triplets

Emotion Analysis from a Perspective Approach **Nov 2016-Dec 2016**

Institution: ICT, CAS
Advisor: Prof. Yanyan Lan

- Built a model to analyze emotional tendency (positive, negative and neutral) from different views based on user comments about cars
- Applied mask matrix to extract car views, utilized RNN to analyze emotional tendency, used a softmax function to compute the emotional tendency
- The precision reached to 0.69 on test dataset

PUBLICATIONS

- Zhou Yang, **Qingfeng Lan**, Jiafeng Guo, Yixing Fan, Xiaofei Zhu, Yanyan Lan and Yue Wang: A Deep Top-K Relevance Matching Model for Ad-hoc Retrieval, China Conference on Information Retrieval 2018 **(Best Paper Award Candidate)**

HONORS AND AWARDS

- The Interdisciplinary Contest in Modeling, Honorable Mention — Dec 2016
- National Endeavor Fellowship (won twice) — Dec 2015 & Oct 2017
- UCAS Second-Class Academic Scholarship (won twice) — Nov 2015 & Oct 2017
- UCAS Third-Class Academic Scholarship — Nov 2016
- CAS Academic Scholarship — Dec 2016

EXTRACURRICULAR ACTIVITIES

President of UCAS Mathematical Modeling Group **2015-2016**

- Founded UCAS Mathematical Modeling Group from scratch
- Organized group members to study and discuss outstanding papers, invited Prof. Lei Chen (Xi'an Jiaotong University) to give a lecture about mathematical modeling
- Organized group members to compete in 2016 MCM/ICM contest
- Our first attempt in MCM/ICM contest: Two Meritorious Winners, Three Honorable Mentions

Physics Teacher in AOLIN Education, Zhejiang **July 2014-Aug 2014**

- Designed a one-month Newtonian Mechanics course for 30 senior high school students
- Gave lectures, assigned and graded homework, explained difficult questions

SKILLS

- Finished online courses with excellent scores in Coursera, include *Machine Learning* (Grade Achieved: 99.6%) and *Deep Learning 5-Course Specialization*
- Skilled in C/C++, Python, Verilog; Familiar with PyTorch, Keras, Tensorflow, Octave/MATLAB, LATEX, Haskell