Guoqing LUO

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EDUCATION

Wuhan University, School of Computer Science Wuhan, China
B.S in Computer Science and Technology, School of Computer Science Sept. 2017—Jun. 2021(expected)
• Cumulative GPA: 3.74/4.00 (89.11/100) 3.84/4.00 (WES)
• Selected Awards: ***National Second Prize,*** Top 5% in China Undergraduate Mathematical Contest in Modeling
• Related Courses: Data Structure, C++ Programming, C# Programming, Principles of Compiler, Introduction to Artificial Intelligence, The Principles of Database, Computer Graphics, The Principles of Operating Systems, etc

Harvard University Boston, USA
Summer School Student July 2018—Aug. 2018
• Course:"Developing Cross-Platform Mobile Apps With Xamarin" (36 academic hours) GPA: **4.00/4.00**

PUBLICATIONS

Guoqing Luo, Jiaxin Pan, Min Peng, "*RDSGAN: Rank-based Distant Supervision Relation Extraction with Generative Adversarial Framework*" [Arxiv] (submitted to NAACL 2021)
Guoshun Nan, Zhijiang Guo, **Guoqing Luo,** Yuxiang Zhou, Wei Lu, "*Learning latent structures for Document-Level Relation Extraction*" (submitted to TKDE 2020)

RESEARCH EXPERIENCE

StatNLP, Singapore, Singapore University of Technology and Design Upper Changi, Singapore
Research Intern, Advisor: Associate Professor **Wei LU** Oct. 2020—Present
Interpretability of Attention Mechanism in Transformers
- Use BiLSTM +Attention to classify SST-2 dataset; Calculate and visualize polarity score & attention score.
- Remove positional encoding in Transformer and visualize attention score of Transformer.

StatNLP, Singapore, Singapore University of Technology and Design Upper Changi, Singapore
Research Intern, Advisor: Associate Professor **Wei LU** Jun. 2020—Present
Interpreting Dialogue-based Information Extraction with Differentiable Variables
- Extract dynamic latent structure based on Hard Kumaraswamy Distribution; Employ a relaxed form of *L*0 regularization to promote latent beliefs; Apply EvolveGCN to capture the dynamism of a graph sequence.
- Pre-process dialogues such as TV Series dialogues into windows of turns to deal with temporal drift.

WHU NLP Lab, Wuhan University Wuhan, China
Research Intern, Advisor: Professor **Min PENG** Dec. 2019—Jun. 2020
RDSGAN: Rank-based Distant Supervision Relation Extraction with Generative Adversarial Framework
- Proposed a novel generative neural framework which 1) learned the distribution of true positive instances and 2) automatically generated valid instances to provide a clean dataset for distant supervision relation extraction.
- Trained the discriminator to learn the distribution of true positive instances, excluding false positive instances via adversarial training; Trained the generator to generate instances more similar to real ones.
- Ranked all the instances in a sentence bag; Selected instances conforming to the distribution of true positive instances via rank-based distant supervision addressing the false positive problem.

School of Computer Science, Wuhan University Wuhan, China
Research Intern, Advisor: Associate Professor **Qin ZOU** Feb. 2018—Feb. 2019
Human Traffic Monitoring Based on Deep Learning and Video Analysis (Team Leader)
Funded by University Students' Innovation and Entrepreneurship Contest Program
- Collected numerical sample data and used TensorFlow API to construct a CNN deep learning model.
- Input collected samples into CNN for feature extraction; After pooling procedures, input features extracted by convolutional layer into RNN; Output the results of classifier, trained and improved the model with big data.

PROGRAM EXPERIENCE

Shenzhen Sunline Tech Co., LTD Internship Shenzhen, China

Intern Software Engineer Jul. 2019—Aug. 2019

- Learned knowledge about knowledge graph, data visualization, the Louvain Algorithm and web crawler.
- Used Python to crawl the data of a thousand-person community, established relationships between community members, and organize all the data into a form of undirected graph using the Louvain Algorithm.
- Used Networkx Python and neo4j to visualize relationships among bank staff; Used the PageRank Algorithm to find and output the data of the most important persons in the wider community.

International Volunteer Program, Nil Manel Foundation Balapitiya, Sri Lanka

Volunteer Team Leader Feb. 2019—Feb. 2019

- Taught kindergartners about language arts and fine arts for 8 hours every day.
- Took care of orphan elephants; Collected and saved sea turtle eggs.

Cambridge University Winter Development Program Cambridge, UK

Student Leader Jan. 2018—Feb. 2018

- Learnt Relevant Course: Psychology and Economics, Understanding of modern marketing communications, Introduction to EU Law and Brexit, Understanding of Creativity, Liszt at the Opera, etc
- Gave final group presentation "Introduction to Reincarnation" and rank 2nd of all 8 teams.

AWARDS & SCHOLARSHIPS

Excellent Student Scholarship **(Rank: 30/367)**, Wuhan University Oct. 2020

S. I. Komarova Scholarship for Academic Excellence, Valeon Scholarship program July 2020

Honorable Mention, ICM of the Consortium for Mathematics and Its Applications Apr. 2020

First Prize **(Top 3%)**, Hubei Province Translation & Interpretion Contest Apr. 2020

National Second Prize **(Top 5% of 42992 teams),** China Undergraduate Mathematical Contest in Modeling Nov. 2019

Excellent Student Scholarship **(Rank: 18/367)**, Wuhan University Oct. 2019

Excellent Student Scholarship **(Rank: 25/367)**, Wuhan University Sept. 2018

PROFICIENCY

Languages: Mandarin (native), English (professional proficiency)

Programming: Python, C++, C, C#, MATLAB, Lingo

English Level: **TOEFL**: 103 (Speaking 25) **GRE**: 321+3.5

Deep Learning Framework: Pytorch / Keras