JIAN WANG
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Education

University of Michigan Ann Arbor, MI
Master of Science in Computer Science (expected) GPA: 3.87 Sep 2015 – Aug 2018
Coursework: Machine Learning, Parallel Computing, Algorithms, Randomness and Computation

Peking University Beijing, China
Bachelor of Science in Physics GPA: 3.73 Sep 2011 – Jun 2015
Coursework: Probability Theory and Statistics, Mathematical Modeling, Theoretical Computer Science

Experience

Graduate Student Instructor, University of Michigan Sep 2016 – Apr 2018

- Taught discussion classes of sizes from 20 to 100 on computer vision and discrete math
- Designed homework and exams for the courses, communicated with professors to finalize the exams

Research Assistant, University of Michigan Summers 2017 & 2018

- Cooperated with PhD students on deep learning projects such as question answering and theorem proving
- Reported to professor weekly to keep projects on track
- Presented our projects and related external papers on lab meetings

Publications

Think Visually: Question Answering through Virtual Imagery
Ankit Goyal, Jian Wang and Jia Deng. *Association for Computational Linguistics (ACL), 2018.*

- Created two synthetic question-answering datasets using Python that test spatial-relation understanding
- Designed a deep neural network in TensorFlow to perform question answering tasks, which can capture spatial relations explicitly from text descriptions
- Demonstrated the advantages of our spatial-relation modules via experiments on our datasets

Premise Selection for Theorem Proving by Deep Graph Embedding
Mingzhe Wang, Yihe Tang, Jian Wang, and Jia Deng. *Neural Information Processing Systems (NIPS), 2017.*

- Constructed a neural network in PyTorch to determine if a premise is useful in proving a conjecture
- Outperformed the former best model on the HolStep theorem-proving dataset by 7% accuracy

Projects

Collecting a theorem proving dataset Sep 2017 – May 2018

- Collected a dataset from a mathematical theorem proving system, annotated the data using existing APIs, and provided a Python interface to enable easy access
- Contacted the authors of the theorem proving system to learn it faster

Hosting the Shape-from-shading in-class challenge Apr 2018

- Built a website to host a challenge in the computer vision class consisting of a login system, an evaluation system, and a leaderboard, using HTML, PHP, SQL, and Python
- Collected feedback from the students and improved my website accordingly

Parallel simulation of sticky particles Dec 2016

- Simulated a box of sticky particles in C, using MPI to achieve load-balanced multi-core computation
- Predicted the states of sticky particles under different temperatures

Skills

- **Programming Languages**: Python (expert), MATLAB (expert), C/C++ (fluent), PHP (prior experience), SQL (prior experience)
- **Deep Learning Frameworks**: PyTorch (expert), TensorFlow (expert)
- **Natural Languages**: English, Chinese