

# JIAN WANG

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## Education

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### University of Michigan

*Master of Science in Computer Science* GPA: 3.87

Ann Arbor, MI

Sep 2015 – Aug 2018

### Peking University

*Bachelor of Science in Physics* GPA: 3.73

Beijing, China

Sep 2011 – Jun 2015

## Skills

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**Programming Languages:** Python, Java, C/C++, Bash, SQL, PHP

**Frameworks:** Amazon Web Services (AWS), PyTorch, TensorFlow, Keras, SpaCy, AllenNLP, Git

## Experience

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### Software Development Engineer, Amazon

Apr 2020 – present

- **Machine Learning Workflow:** Developed applications to orchestrate computing resources for model training and releasing workflow. Achieved smooth user experience while maintaining high data security.
- **Serverless Application:** Leveraged AWS serverless to achieve agile development. Applied AWS Lambda for computing, with REST API as input point, SQS as connection, and S3, DynamoDB as data storage

### Natural Language Understanding (NLU) Scientist, LivePerson

Nov 2018 – Apr 2020

- **Text Classification:** Created deep learning NLU library for intent detection and text classification. Achieved fast inference speed by searching among model architectures. Increased accuracy by 5%
- **Anomaly Detection:** Improved anomaly detection algorithm to identify out-of-topic content. Replaced former algorithm in intent classification and increased accuracy by 2%
- **Automation:** Automated model training workflow and model hyperparameter searching processes. Achieved 4x speedup in training by optimizing hardware usage

### Vision and Learning Lab Research Assistant, University of Michigan

Summers 2017 & 2018

- **Question Answering:** Designed spatial-aware deep learning architecture for question answering. Created datasets for spatial-relation understanding. Improved 6% accuracy than former state-of-the-art model
- **Math Theorem Proving:** Proposed siamese neural network to assist math theorem proving. Outperformed former state-of-the-art model by 7% accuracy on premise selection dataset

## Projects

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**Programmer Chatbot:** Built and trained machine learning chatbot that answers coding-related questions, by identifying the most relevant answers on Stack Overflow website. Streamlined coding problems resolution

**Computer Vision Challenge:** Hosted in-class computer vision challenge for over 100 participants. Built website for registration and model evaluation using HTML, PHP, SQL, and Python

**Parallelized Simulation:** Designed load-balanced algorithm for simulating sticky-particle movements in parallel. Achieved 45x simulation speed up compare with single-threaded version on server

## Awards

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**Gold Medal, Chinese Physics Olympiad (2011):** Excelled in both physics theory and experiment competition. Only 51 students awarded in China in year 2011

**Gold Medal, Peking University Math Modeling Competition (2013):** Established a team of three. Modeled and simulated basketball shooting. Achieved 9% among 82 teams

## Publications

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### Think Visually: Question Answering through Virtual Imagery

Ankit Goyal, Jian Wang, and Jia Deng. *Association for Computational Linguistics (ACL)*, 2018.

### Premise Selection for Theorem Proving by Deep Graph Embedding

Mingzhe Wang, Yihe Tang, Jian Wang, and Jia Deng. *Neural Information Processing Systems (NIPS)*, 2017.