# Shuowei (Shawn) **JIN**

Network System · Deep Learning

## Education

### Special Class for the Gifted Young, University of Science and Technology of China (USTC)

B.ENG. in Computer Science — *Sept. 2016 - Present*

- Overall GPA: 3.81/4.3
- Academic Rank: **Top 5%** among 226 students in Computer Science Major
- Honours: Honour Program Student in Computer and Information Science
- **Vice President** of USTC's Artificial Intelligence Club

## Research Experience

### CSI-based Action Recognition Transfer Learning System

*IOT System Lab, USTC*

Research Associate, Supervised by Prof. Wei Gong — *Feb. 2019 - Dec. 2019*

- Wrote a paper as the first author, which will soon be submitted to a top conference.
- Proposed a novel two-step Transfer Learning Architecture utilizing the Channel State Information (CSI) signal data collected from WiFi devices to recognize user actions while simultaneously reducing computation costs.
- Designed a new Adversarial Training method to address the incorrect domain adaptation problem by introducing the self-supervised learning.

### Unsupervisedly Build Verb and Event Hierarchy across Corpus

*ISI, University of Southern California*

Research Intern, Supervised by Prof. Nanyun Peng — *Jun. 2019 - Present*

- Write the paper as the first author which will soon be submitted to a top conference.
- Proposed a fully unsupervised method for building a granularity-level event hierarchy from large corpus by incorporating a brand-new representation function into graph pooling method.
- Developed a novel way to model events on graphs' meta-paths and raised a new hierarchical embedding method to embed the events in hyperbolic space and acquire hierarchical information from this space.
- Built the entire evaluation pipeline and conducted extensive experiments using the British National and Reuters Corpus datasets.

### Inferring Mobility Relationship with Trajectory Data

*Big Data Lab, USTC*

Research Associate, Supervised by Prof. Defu Lian — *Jan. 2019 - Mar. 2019*

- Coauthored a paper which was successfully accepted by IJCAI' 2019.
- Altered Graph Neural Network on User Mobility Heterogeneous Graph, and predicted relevant relationships accurately from user locations.
- Trained a skip-gram based model to use the dataset to complete location embedding, performed subsequent experiments using Brightkite and Gowalla datasets, and conducted broad background research on social relationship mining techniques.

### Autism Detection and Analysis based on Deep Learning

*AI Lab, City University of Hong Kong*

Research Intern, Supervised by Prof. Kay Chen Tan — *Sept. 2018 - Dec. 2018*

- Completed comprehensive data analysis on the ABIDE-1 and ABIDE-2 dataset and found the correlation between neighbourhood points.
- Incorporated Graph Neural Network to fully utilize the spatial-temporal relation of data, improving the accuracy by a great margin.
- Performed extensive experiments involving the implementation of state-of-the-art algorithms for detecting autism on the basis of Resting-State functional MRI scan signals.

## Publication

Yongji Wu, Defu Lian, **Shuowei Jin** and Enhong Chen. Graph Convolutional Networks on User Mobility Heterogeneous Graphs for Social Relationship Inference. In *Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence (**IJCAI-19**)*.

## Working Experience

### Teaching Assistant for Computer Network Course

*USTC*

School of Computer and Information Science — *Sept. 2019 - Present*

- Selected from a competitive candidate pool from the School of Computer and Information Science.
- Designed and instructed experiments on implementing TCP/UDP communication and extending UDP to achieve GBN protocol.
- Conducted teaching assistant affairs including grading assignments, administering office hours, laboratory sessions and examinations.

## Honors & Awards

**Gold Award (2/343),** Honour Program Award provided by JOYN Company — *Shanghai, China 2018*

**Top 10%,** Outstanding Student Scholarship — *USTC, China 2017,2016*

## Skills

**Programming** C/C++, Python, Java, Verilog, Matlab, HTML, MPI, OpenMP

**Standardized Tests** *TOEFL:* 103 (R:27, L:29, S:22, W:25) *GRE:* 323+3.5 (V:154 Q:169 W:3.5)