My research on semantic parsing and Data mining that involve a series of issues : probabilistic graphical models, transfer learning, multitask learning and nerual networks. Currently, I am interesting in varies approaches to deep learning (GAN, Reinforcement Learning, etc.) and their applications to natural language processing.

</> Projects & Experiences

Present 2018.04 | **Semi-automatically Extending Mandarin VerbNet Annotations** — Python

- *Semi-automatic Labeling* : Applying automatic semantic role labeling to improve annotation efficiency and accuracy for Mandarin VerbNet.
- *Semantic Role Labeling* : Automatic annotation method for semantic roles based on sequence labeling.
- *Self-Attention* : Self-attention alleviates the loss of semantic expression in long sentences.

Semantic Role Labeling | Semi-automatic Labeling | Self-Attention

2018.07 2018.06 | **Shared Task : Text Traceability Technology Evaluation (SMP2018-ETST)** Ranking First — Python

- *Paraphrase Detection* : Designed a new paraphrase detection algorithm to determine whether a sentence is adapted from another sentence.
- *Inverted Index* : Pre-screening candidate sentence pairs by establishing an inverted index by weighted tf-idf.
- *Ensemble Learning* : Improving the accuracy of paraphrase detection with ensemble learning.

Paraphrase Detection | Language Model | Unsupervised Learning | Inverted Index

2018.03 2017.12 | **Leveraging Paraphrases to Enhance Semantic Dependency Parsing** — Python

- *Paraphrase Extraction* : Designed a new paraphrase extraction algorithm and building PKU Paraphrase Bank, a Chinese paraphrase corpus consisting of over 290,000 sentence pairs.
- *Semantic Consistency* : Exploring the implicit semantic consistency of paraphrase sentence pairs.
- *Semi-supervised Learning* : Extending the training data set using a semi-supervised learning method; improved semantic parsing accuracy is obtained.

Paraphrase Extraction | Semantic Consistency | Semi-supervised Learning

2017.05 2017.03 | **Anomaly Detection Tool Based On Extended Latent Dirichlet Allocation (LDA)** — Java/Js/SQL

- *Topic Modeling* : Constructing an extended multi-view LDA model to establish associations between different categories of features in the same instance.
- *Anomaly Detection* : Five methods of similarity measurement are analyzed and the best method is selected.
- *Result Presentation* : Web-based data visualization. It is possible to provide an overview of the data as a whole and to pay attention to the details of the data as needed.

Extended LDA | Anomaly Detection | Back-end Development | Web Design | Data Visualization

2015.08 2015.03 | **Interactive Drum Robot Based On Wearable Computing** — C++/PCB

- *Hardware Building* : Design the robot body skeleton structure according to the principle of mechanics;
- *Circuit Design* : Drum stick circuit design, Printed Circuit Board(PCB) drawing;
- *Algorithm Design* : Design and implementation of knocking algorithm and intelligent soundtrack algorithm;

Wearable Computing | Intelligent Instrument | Internet of Things | Cloud Computing

Campus Life

- Chuang Yue Space Of Central South University (first maker space, Star Club of CSU) **Vice President** 2015—2016
  On behalf of Central South University to participate in the Hunan Science and Technology Association's first "Chuangke·Hunan" technology products and project exhibition;
- Intelligent Car Association of Central South University **Vice President** 2014—2015
  Organizing 2016 Freescale Smart Cars National Finals; conducting a series of pre-competition training courses and promotional activities;
- College Football Team (more than 3,600 people in the whole college) **Player** 2013—2015
  2013 school-level freshman semi-finals; 2015 school-level football league champion;