

C (+86) 18101389470 ■ bw\_zhang@pku.edu.cn

in linkedin.com/in/imbowei

No. 128, Zhongguancun North Street, Haidian District, Beijing

**i** Zip Code: 100080 i Online Resume

# Software Engineer (NLP | ML)

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.

### Education

2017.09 - Present

Data Science, Natural Language Processing

Peking University (PKU)

Language Computing & Web Mining Group, Institute of Computer Science and Technology, Peking University The MOE Key Laboratory of Computational Linguistics, Peking University

Center for Data Science, Peking University

2013.09 - 2017.06

**Bachelor** Intelligence Science And Technology

Central South University (CSU)

**GPA:** 92.11/100 | **Ranking:** 3/59

## 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

# 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) 2013 school-level freshman semi-finals; 2015 school-level football league champion;

Player

2013-2015

# Honors & Awards

Merit Student of Peking University (<10%)	2017-2018
Shared Task: Text Traceability Technology Evaluation (SMP2018-ETST) Ranking First	Summer 2018
Outstanding Graduates from Hunan (<3%)	Summer 2017
Excellent Club Cadre of Central South University	<b>Fall</b> 2016
Xinhualian Scholarship of Central South University (<3‰)	<b>Fall</b> 2016
Merit Student of Central South University (<10%, Three consecutive years)	2014–2016
Second Scholarship of Central South University (<10%, Three consecutive years)	2014-2016
The 5th China University Students Intelligent Design Competition First prize	<b>Fall</b> 2015
The 11th University Student Programming Competition of Hunan First prize	<b>Fall</b> 2015
National Encouragement Scholarship (<4%)	<b>Fall</b> 2014
Leimu Scholarship of Central South University (<0.7‰)	<b>Fall</b> 2014