

# Bowei Zhang

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## 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 neural networks. Currently, I am interesting in various approaches to deep learning (GAN, Reinforcement Learning, etc.) and their applications to natural language processing.

## 🎓 Education

2017.09 – Present	<b>Master</b> Data Science, Natural Language Processing <i>Language Computing &amp; Web Mining Group, Institute of Computer Science and Technology, Peking University</i> <i>The MOE Key Laboratory of Computational Linguistics, Peking University</i> <i>Center for Data Science, Peking University</i>	<b>Peking University (PKU)</b>
2013.09 – 2017.06	<b>Bachelor</b> Intelligence Science And Technology GPA : 92.11/100   Ranking : 3/59	<b>Central South University (CSU)</b>

## 🔗 Projects & Experiences

Present 2018.04	<b>Semi-automatically Extending Mandarin VerbNet Annotations</b> Python > <i>Semi-automatic Labeling</i> : Applying automatic semantic role labeling to improve annotation efficiency and accuracy for Mandarin VerbNet. > <i>Semantic Role Labeling</i> : Automatic annotation method for semantic roles based on sequence labeling. > <i>Self-Attention</i> : Self-attention alleviates the loss of semantic expression in long sentences. Semantic Role Labeling    Semi-automatic Labeling    Self-Attention
2018.07 2018.06	<b>Shared Task : Text Traceability Technology Evaluation (SMP2018-ETST)</b> Ranking First    Python > <i>Paraphrase Detection</i> : Designed a new paraphrase detection algorithm to determine whether a sentence is adapted from another sentence. > <i>Inverted Index</i> : Pre-screening candidate sentence pairs by establishing an inverted index by weighted tf-idf. > <i>Ensemble Learning</i> : Improving the accuracy of paraphrase detection with ensemble learning. Paraphrase Detection    Language Model    Unsupervised Learning    Inverted Index
2018.03 2017.12	<b>Leveraging Paraphrases to Enhance Semantic Dependency Parsing</b> Python > <i>Paraphrase Extraction</i> : Designed a new paraphrase extraction algorithm and building PKU Paraphrase Bank, a Chinese paraphrase corpus consisting of over 290,000 sentence pairs. > <i>Semantic Consistency</i> : Exploring the implicit semantic consistency of paraphrase sentence pairs. > <i>Semi-supervised Learning</i> : 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	<b>Anomaly Detection Tool Based On Extended Latent Dirichlet Allocation (LDA)</b> Java/Js/SQL > <i>Topic Modeling</i> : Constructing an extended multi-view LDA model to establish associations between different categories of features in the same instance. > <i>Anomaly Detection</i> : Five methods of similarity measurement are analyzed and the best method is selected. > <i>Result Presentation</i> : 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	<b>Interactive Drum Robot Based On Wearable Computing</b> C++/PCB > <i>Hardware Building</i> : Design the robot body skeleton structure according to the principle of mechanics; > <i>Circuit Design</i> : Drum stick circuit design, Printed Circuit Board(PCB) drawing; > <i>Algorithm Design</i> : Design and implementation of knocking algorithm and intelligent soundtrack algorithm; Wearable Computing    Intelligent Instrument    Internet of Things    Cloud Computing

## Campus Life

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- > 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;

## Honors & Awards

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