Bowei **Zhang**

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Algorithm Engineer (NLP | ML)

🎓 Education

2017.09 – 2020.06	**Master** Data Science, Natural Language Processing, **Ranking** : 6/67	Peking University

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

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

</> Projects & Experiences

2018.10 / 2018.08 **JingDong Business promotion division**   Advertising algorithm engineer (intern)
> *Advertising business combing* : Combing the business logic of Jingjuntong marketing product line and the related business logic of First Focus Haitou；
> *Home Focus CTR Model* : The attention mechanism is added to the Home Focus CTR model of Jingdong APP, and the click rate is expected to increase XX；
> *Commercialization of e-commerce capability* : Combing the capabilities of Jingdong e-commerce center, analyzing the pain points of typical industries (enterprises), forming a set of commercial solutions；

CTR Model | Self-Attention | Hierarchical Attention

2018.10 / 2018.08 **Semi-automatically Extending Mandarin VerbNet Annotations**   Python (pyTorch)
> *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 / 2018.05 **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

2018.02 / 2017.10 **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 / 2017.02 **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)**   **Player**   2013—2015
> 2013 school-level freshman semi-finals; 2015 school-level football league champion;

🔨 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	**Fall** 2016
Xinhualian Scholarship of Central South University **(<3‰)**	**Fall** 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**	**Fall** 2015
The 11th University Student Programming Competition of Hunan **First prize**	**Fall** 2015
Central South University Football League School Championship	**summer** 2015
National Encouragement Scholarship **(<4%)**	**Fall** 2014
Leimu Scholarship of Central South University **(<0.7‰)**	**Fall** 2014