JUNJIE HUANG

(+86)15652580126 ⋄ JunjayHuang@outlook.com

EDUCATION

Beihang University *09/2016 - Present*
B.S. Candidate, in **Automation Science**
School of Automation Science and Electrical Engineering. GPA: **3.85/4.0**
Major Courses: C Language, Computational Linguistics, Advanced Mathematics, Linear Algebra, Probability and Statistics, Discrete Mathematics, etc.
Optional Courses: Machine Learning (CS229), Deep Learning for Natural Language Processing (CS224n), Deep Learning Specialization

PUBLICATIONS

Modeling Semantic Compositionality with Sememe Knowledge.
Fanchao Qi*, **Junjie Huang***, Chenghao Yang, Zhiyuan Liu, etc. **ACL 2019 oral**
** indicates equal contribution*

COS960: A Chinese Word Similarity Dataset of 960 Word Pairs.
Junjie Huang*, Fanchao Qi*, Chenghao Yang, Zhiyuan Liu, Maosong Sun. *ArXiv pre-print*
** indicates equal contribution*

Head Dynamic Controlled Device of Electric Wheelchair for High Paraplegic Patients.
Shaoping Wang, **Junjie Huang**, etc. **Chinese Patent** ZL 2017 1 0627293.X

RESEARCH EXPERIENCE

Tsinghua NLP Lab, Tsinghua University *05/2018 - Present*
Research Assistant Advisor: **Prof. Zhiyuan Liu**

§ **Modeling Semantic Compositionality with Sememe Knowledge**

* The project aims at modeling the meaning of the Chinese multiword-expressions (MWE) by composing the meaning of their components and it's accepted as an **ACL2019** oral presentation.
* We propose to incorporate sememes, a kind of general linguistic knowledge, into semantic compositionality models for the first time.
* We design a confirmatory experiment and preliminarily verify the effectiveness of sememe knowledge in modeling semantic compositionality.
* We propose two sememe-incorporated semantic compositionality models for MWE representation learning, and they achieve performance enhancement in both intrinsic and extrinsic evaluations.

Queen's TAMU Lab, Queen's University *07/2019 - 09/2019*
Research Intern Advisor: **Prof. Xiaodan Zhu** and **Dr. Mo Yu**

§ **Multi-hop QA in Medical Domain via Path Ranking**

* The project aims at designing an algorithm of multi-hop question answering in medical domain.
* We propose to rank drug/protein paths based on the composition of whether interaction relation exsits between the entity pairs in the path.

Health Service and Reliability of Mechatronic System Lab, BUAA *09/2016 - 05/2018*
Research Assistant Advisor: **Cheung Kong Scholar Prof. Shaoping Wang**

§ **Head Dynamic Controlled Device of Electric Wheelchair for High Paraplegic Patients**

* We design a brand-new system for paraplegic patients to use electric wheelchairs safely and smoothly with their head movement and apply for a **Chinese Patent**.
* We conduct a two-degree-of-freedom mechanical structure with high adaptability to existent electric wheelchairs.
* We win the **2nd prize** in Fengru Cup Technological Originality Competition.

§ **A Target Grasping Robot Based on Image Recognition**

* We design an integrated robot car which can automatically make decisions to run and grasp targets with different colors and shapes. (We win **1st prize** in Drive-Away Cup Robot Competition.)

PROJECTS

§ **Discrete Math: Matrix Representations of Graphs and Special Graph Judgment**

* Build a software in Python with a GUI to display matrix representations of graphs.
* Implement algorithm to judge special graphs like Euler Graph and Planar Graph.

§ **Re-implement Several Popular NLP Algorithms**

* Implement several NLP algorithms including Bert, Transformer, TransE, Word2vec and etc.

SKILLS

Programming Languages	Python, C, C++, MATLAB, etc.
Software & Tools	PyTorch, Tensorflow, LaTeX, Arduino, Solidworks,etc.
Standard Test	TOEFL:100, GRE:151V+170Q+3.5W

ACTIVITIES

President, Automation Control Association of Beihang University (03/2018-Present)
Performed as a chief organizer of regular science and technology salon and robot competition

HONERS AND AWARDS

China National Scholarship, Ministry of Education of the P. R. China. (2%) (2018)

First Prize of Outstanding Academic Performance Scholarship, Beihang University.(3%)(2017 and 2018)

SMC Scholarship, Beihang University. (5%) (2017 and 2018)

Second Prize in Beihang Fengru Cup Technological Originality Competition, Beihang University (5%)

First Prize in Drive-Away Cup Robot Competition, Beihang University.