Yiheng Shu (舒意恒)

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Graduate student since 2020; MSRA research intern
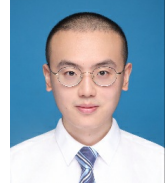
EXPERIENCE

Nanjing University　　　　　　　　　　　　　　　　　　　　　　　　2020.09 - 2023.06

Computer Science, master student of Websoft Research Group, Department of Computer Science and Technology
Research Direction: Question Answering / Knowledge Graph; Average Grade: 90.96 / 100

Northeastern University (CN)　　　　　　　　　　　　　　　　　　　2016.09 - 2020.06

Software Engineering Bachelor, Software College, GPA 4.1073 / 5.0 (91.073, top 1.7%)

RESEARCH

Research Internship of Microsoft Research Asia　　　　　　　　　2022.02 - Present

Knowledge Computing group; Research Direction: Knowledge Base Question Answering.
Working in progress.

We have achived state-of-the-art on GrailQA leaderboard with both compositional generalization and zero-shot settings.

Question Decomposition Tree for Answering Complex Questions over Knowledge Bases　　2021.07 - Present

Xiang Huang, *Yiheng Shu*, Xixin Hu, Xuan Wu, Yuzhong Qu
About to submit.

In this work, question decomposition tree (QDT) is proposed to represent the decomposition structure. Experiments show that the method has achieved state-of-the-art performance in LC-QuAD and ComplexWebQuestions.
Responsible for the development and experiment of the query generation, and participated in paper writing.

EDG-based Question Decomposition for Complex Question Answering　　2020.09 - 2021.04

Xixin Hu, *Yiheng Shu*, Xiang Huang, Yuzhong Qu
International Semantic Web Conference (ISWC) 2021.

An entity-centric question decomposition method is proposed to represent the question structure in order to handle componet linking and subquery composition, and a QA system on DBpedia is implemented. Experiments show that the system achieves state-of-the-art on both LC-QuAD and QALD-9.
Participated in the development of the relation linking and experiments including decomposition quality evaluation, ablation study, etc.

Deep Learning for Sequential Recommendation: Algorithms, Influential Factors, and Evaluations　　2018.11 - 2019.05

Hui Fang, Danning Zhang, *Yiheng Shu*, Guibing Guo
ACM Transactions on Information Systems (TOIS) 2020. The content was presented as a tutorial of International Conference on Web Engineering (ICWE) 2019.

This survey proposes the concept of sequential recommendation, summarizes existing approaches based on three types of behavioral sequences (experience, transaction, and interaction), summarizes the key factors affecting the performance of deep learning models, demonstrates these factors through experiments, and systematically discusses future research directions and challenges.
Participated in the implementation of some algorithms (user dwell time, user modeling, data enhancement, etc.) in the experiments and paper writing.

HONORS & AWARDS

NJU First Class Academic Scholarship for Master Students (top 20%)	2021
Outstanding Graduates in Liaoning Province (top 3%)	2020
Meritorious Winner in MCM/ICM (international top 6.79%)	2019
NEU Pacemaker to Outstanding Student (top 1.2%)	2018
National Scholarship (top 3%)	2018