

RESEARCH INTERESTS

I'm a graduate student majoring in software engineering at Tongji University, China. My research interests are mining software repositories with various techniques like information retrieval and natural language processing. The goal of my research is to improve the coding efficiency of developers.

EDUCATION BACKGROUND

Tongji University, Shanghai, China

Sep 2018 - Expected Mar 2021

M.S. in Software Engineering, School of Software Engineering

GPA: 90/100

Awards: 2nd Prize at National Post-Graduate Mathematical Modeling Contest (2018)

Tongji University, Shanghai, China

Sep 2014 - Jun 2018

B.S. in Logistic Engineering, School of Transportation Engineering (with Summa Cum Laude)

GPA: 4.2 / 5.0 (Top 3 of 28)

RESEARCH EXPERIENCES

Smart Resource Allocation among Cities in Region

May 2020 - Present

- Built a machine learning model with XGBoost to predict the innovation ability of cities based on their innovation-related statistics.
- Combined the prediction model with optimization algorithms like Simulated Annealing to find the optimal distribution plans for the maximum regional innovation ability.

Deep Learning based Semantic Code Search

Aug 2019 - May 2020

- Proposed a deep learning based semantic code search model, PSCS, and obtained a better understanding of code structure, which outperforms state of the art by 19.2% in MRR.
- Demonstrated the importance of code structure in code search tasks through ablation experiments.

Requirement based Library Recommendation

Dec 2018 - Aug 2019

- Identified a new perspective for library recommendation: textual requirement description based library recommendation for the software project.
- Proposed a model based on Seq2seq to recommend available third-party libraries with a SuccessRate@10 of 90.4%, which proves that this perspective has practical values.

PUBLICATIONS

- **Zhensu Sun**, Yan Liu, Ziming Cheng, Chen Yang, Pengyu Che. "Req2Lib: A Semantic Neural Model for Software Library Recommendation". Published in SANER 2020.
- **Zhensu Sun**, Yan Liu, Chen Yang, Yu Qian. "PSCS: A Path-based Neural Model for Semantic Code Search". Under Submission.

SKILLS

- **Programming Languages:** Python, JavaScript, SQL
- **Frameworks:** Pytorch, Pandas, Numpy, Scikit-Learn, Node.js, React.js.
- **English:** IELTS: Listening: 7.5, Reading: 8.5, Writing: 6.5, Speaking: 6.0, Overall Band Score: 7.0