Rehema Abulikemu

Tel: (86) 188-1072-5998 | **Email:** Rahima@pku.edu.cn | Website

EDUCATION BACKGROUND

Peking University Beijing, China

B.S. in Data Science and Big Data Technology GPA: 3.38/4.0 09/2017 - 07/2022

RESEARCH INTERESTS

- I am broadly interested in researches that have practical contribution and give practical sense. More specifically, my interests include Human-Computer Interaction, Software Engineering, Accessibility, Security & Privacy and so on.

HONORS AND SCHOLARSHIP

2017 The First Prize of Freshman Scholarship, PKU 12/2017

RESEARCH EXPERIENCE

OJ Problem Description Generation via Code Summary Generated by Large Language Models 10/2022-present

Supervisor : Tao Xie (School of Computer Science, Peking University)

- Goal: OJ Problem recommendation based on the description generation technique: given a code snippet, generating multiple problem descriptions of the code snippet, and using clustering algorithm to classification screening the results and recommend the descriptions as problem.
- Trained large language models based on Transformer. Given a code snippet, the models will generate code summary. I am still working the other parts of this project.

Need-finding study of "Virtual Study Room" 06/2022-09/2022

Mentor : Xinyue Chen (University of Michigan)

- Goal: Aiming to improve the online self-regulated learning experience of students when they study from home.
- Conducted need-finding study to find what are the needs and challenges of students when they watch "Virtual Study Room" livestreaming by content analysis and interviewing. This need-finding study was submitted to CHI2023.

OJ Problems Recommendation based on Code Clone Detection Technology (Graduation thesis) 01/2022-06/2022

Supervisor : Tao Xie (School of Computer Science, Peking University)

- Goal: Focusing on recommending a large number and variety of algorithm problems of similar difficulties automatically for interviewers of programming related jobs.
- Used an approach based on the similarity of code implementations, which includes two techniques: 1) based on NiCad, 2) based on the information retrieval technique.

Data Processing and Visualization of Chinese Administrative Division Network 02/2022-06/2022

Supervisor : Hongmou Zhang (Department of Urban and Regional Management, Peking University)

- Processed the Code of Administrative Division from 2012 to 2020 based on the patterns of the code.
- Constructed trees for the data of each year according to the affiliation of administrative divisions and visualized them. Connected these trees based on changes like code-change, name-change, division and consolidation of administrative divisions and built a big network, and visualize it.
- All the code was written in Python. Pandas and numpy were used for data processing. Networkx, matplotlib, multinetx were used for visualization.

COURSE PROJECTS

Scene classification based on CNN (code) 05/2021

Text Retrieval Tool (code) 05/2021

Detection and recognition of ticket QR code (code) 12/2020

English text classification based on RNN and CNN models (code) 12/2020

Book sales management system 11/2020

Chinese Word Segmentation based on structured perceptron model (code) 10/2020

VOLUNTEER AND LEADERSHIP EXPERIENCE

Assistant Minister, Student union of Yuanpei College, Peking University 09/2018-06/2019

- Responsible for organizing activities to serve students in minority communities.

LANGUAGES AND SKILLS

Language: English (fluent), Chinese (native), Uighur (native), Korean (Intermediate)

Programming: Python, C++/C, SQL, SAS, HTML, CSS, JavaScript, React, D3, Linux/Bash, Git

Software: MS Office, Adobe Photoshop

Other Skills: LaTeX, Machine Learning