Chen Chen

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RESEARCH INTERESTS

Natural Language Processing, Graph Neural Networks, Sentiment Analysis, Social Media

PUBLICATION

Chen Chen, Mingwei Li, Fenghuan Li, Haopeng Chen and Yuankun Lin. Heterogeneous Subgraph Network with Prompt Learning for Interpretable Depression Detection on Social Media. Knowledge-Based Systems. 2024. Conditionally Accepted. **(JCR Q1, IF 8.8)**

RESEARCH EXPERIENCE

Laboratory Research at the Guangdong University of Technology Sep 2020 — Jun 2024

- Focused on evaluating depressive tendencies through social media analysis and sought insights into improving the interpretability of language models at the Graph Neural Networks Lab.
- The research focused on interpretability beyond superior performance. Proposed employing prompt learning to objectively map social users' implicit psychological states in a novel way, utilized the heterogeneous graph and subgraph to capture interaction, and generate more discriminative representations via self-supervised comparative learning.
- This experience produced a paper submission to Knowledge-Based Systems, as well as two invention patents (CN 2023101434276 et al.) and three software copyrights (CCPC 2022SR0708926 et al.).

Red Bird Challenge Camp at the Hong Kong University of Science and Technology Jun 2023 — Jul 2023

- This was an effective teamwork experience, the team focused on implementing motion-assisted robots. Structured graphs based on syntax and semantics, utilized a comparative learning approach to derive scores to address inefficiencies and low interpretability in voice input methods for space-constrained mobile devices in the responsible part.
- Currently writing this work for publication, and have presented research via presentations, posters, and videos for several academic groups.

EDUCATION

Guangdong University of Technology (#59 in AI Subject global, U.S.News) Guangzhou, China
Bachelor of Engineering in Artificial Intelligence Sep 2020 — Jun 2024

- Cumulative GPA: 3.47/4.00 (Top 10 in Major), Last Two Years GPA: 3.86/4.00
- Dissertation Title: Heterogeneous Subgraph Network with Prompt Learning for Interpretable Depression Detection on Social Media (Excellent Bachelor Thesis Award, Top 3% in School)

AWARDS and FUNDING

Scholarship Sep 2020 — Jun 2024
National Scholarship (Top 1% in School), Innovation Scholarship (Top 3% in School), Excellent Student Scholarships (Top 28% in School) et al

Funding Sep 2020 — Jun 2024
Natural Science Foundation of Guangdong Province (No.2021A1515012290), Guangdong Provincial Key Laboratory of Cyber-Physical Systems (No.2020B1212060069), and National & Local Joint Engineering Research Center of Intelligent Manufacturing Cyber-Physical Systems

Company-Sponsored Scholarship Sep 2020 — May 2023
37 Interactive Entertainment Ltd. and Guangdong Youxin Foundation et al

Coding Competition Apr 2023
Second Prize of the 14th "LanQiao Cup" National Software and Information Technology Professionals Competition

Algorithm Competition Apr 2022
Top 5 % (35 / 803) by Individual in the Kaggle Competition "Natural Language Processing of Disaster Tweets"

Volunteer Work Feb 2021
Provincial Outstanding Volunteer Award for Combating COVID-19 Epidemic

MEMBERSHIP

Graduates Member (NO.U7669G), China Computer Federation (CCF) Sep 2021 — Present

INTERNSHIP EXPERIENCE

China Mobile Information Technology Co., Ltd. (FORTUNE GLOBAL 100) Guangzhou, China
Intern in Artificial Intelligence and Big Data Department Jun 2023 — Aug 2023

- Deployed ChatGLM2 in a live production setting, and optimized prompt words to limit the GPU memory usage of a single model to below 2GB.
- Introduced ChatSQL to enable non-specialized database users to query and interact with databases using natural language, enhanced its applicability across diverse data analysis settings, and boosted retrieval accuracy to over 85%.

TEACHING

Research Assistant at the Guangdong University of Technology Mar 2021 — Jun 2021

- Instructed a class about people weekly, covering basic Python programming and an introduction to NLP.

SELECTED COURSES

Major Courses (/4.0)

- Advanced Machine Learning - 3.8
- Natural Language Processing - 4.0
- Text Information Processing - 3.6
- Recognition of Patterns - 3.9
- Computer Vision - 4.0
- Data Mining - 3.9
- Knowledge Engineering and Knowledge Graph - 3.5

Mathematics Courses (/4.0)

- Numerical Analysis - 3.7
- Optimization Method - 4.0
- Discrete Mathematics - 3.9
- Advanced Mathematics - 3.5
- Linear Algebra - 3.7
- Digital Signal Processing - 4.0
- Theory of Probability and Mathematical Statistics - 4.0

LANGUAGE and SKILLS

- Language: IELTS(Academic) - 7.0 (Overall Score)
- Coding: Python, C, JavaScript, HTML/CSS
- Tools: Linux Shell, Matlab, Latex

REFERENCES

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