Chengyu Huang

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EDUCATION

National University of Singapore   Aug 2019 - May 2023

Bachelor of Computing, Major in Computer Science
- Second major: Mathematics
- Cumulative Average Point: 4.98/5.0; Rank: $\leq 2/759$; Most Outstanding Graduate

Swiss Federal Institute of Technology in Zurich   Feb 2022 - July 2022
- Exchanged at ETH Zurich and took the courses in Machine Learning, 3D Vision, Natural Language Processing, Convex Optimization, German A1.1, and German A1.2
- Represented NUS as exchange ambassador and promoted NUS on campus booth event

RESEARCH EXPERIENCE

Research Intern, H2Lab, University of Washington   May 2023 - Present
- Investigated Reinforcement Learning from Human Feedback for response generation with citations, a direction that aims at enhancing the truthfulness of language models

Research Assistant, School of Computing, NUS   May 2023 - Present
- Designed and implemented an NLP based credential-taking intention and text brand detector for HTML webpages, which increases recall and precision of an existing phishing webpage detector

Research Intern, NExT++ Research Center, NUS   Oct 2021 - May 2023
- Adapted a model based on GAN and LSTM for response generation in a multi-party context with the help of relational thinking, which was shown to be effective without topic or thread labels
- Designed a global clustering model for conversation disentanglement with contrastive learning and K means, and the model was shown to be more effective than traditional 2-stage models
- Proposed reordering techniques for conversation disentanglement with the help of curriculum learning, which can increase the generalizability of existing models on different dialogues
- Constructed a multi-party response generation pipeline with conversation disentanglement, which can generate accurate and diverse responses in a multi-party conversation

PUBLICATIONS

Conference papers
- Chengyu Huang, Zheng Zhang, Hao Fei, and Lizi Liao. "Conversation Disentanglement with Bi-Level Contrastive Learning." *Proceedings of the Findings of the Association for Computational Linguistics: EMNLP 2022.* [paper]
- Chengyu Huang, Zeqiu Wu, Wenya Wang, and Yushi Hu. "Helping Large Language Models Generate Better Citations with Fine-Grained Rewards." *The 62nd Annual Meeting of the Association for Computational Linguistics,* submitted. [paper]
- Yuexin Li, Chengyu Huang, and Bryan Hooi. "Unleashing the Power of Reference-Based Phishing Detectors with Multimodal Knowledge Graphs." *The 33rd USENIX Security Symposium,* submitted. [paper]
- Suyu Liu*, Chengyu Huang*, Libo Qin, Hao Fei, Tat-Seng Chua, and Lizi Liao. "Disentangle Multi-party Conversations as Reordering with Curriculum." *The Annual Meeting of the Association for Computational Linguistics,* submitted. [paper]
- Lizi Liao, Chengyu Huang, and Tat-Seng Chua. "Relational Thinking-based Response Generation." *The Annual Meeting of the Association for Computational Linguistics,* submitted. [paper]

- Tianhao Dai, Lizi Liao, and Chengyu Huang. "Multi-party Response Generation with Relation Disentanglement." Work in progress. [paper]

ACADEMIC SERVICE

Reviewer, Dialogue and Interactive Systems track, EMNLP   July 2022 - Aug 2022

HONORS AND AWARDS

IMDA Excellence in Computing Prize [certificate]   5 June 2023
- A cash prize of $3500 awarded to the Most Outstanding Graduate in the Bachelor of Computing programme from the Infocomm Media Development Authority in Singapore

Dean's List, School of Computing   Jan - May 2023; Jan - May 2021; Aug - Dec 2020
Senior Middle 2 Scholarship   Aug 2019 - May 2023

TEACHING EXPERIENCE

Teaching Assistant, School of Computing, NUS
- CS3230: Design and Analysis of Algorithms   Aug 2021 - Nov 2021
- CS2100: Computer Organization   Jan 2021 - Apr 2021
- CS1231S: Discrete Structures   Aug 2020 - Nov 2021
- CS1101S: Programming Methodology   Aug 2020 - Nov 2020

PROFESSIONAL EXPERIENCE

Backend Engineer Intern, Global Payment, ByteDance   Sep 2022 - Jan 2023
- Developed a storage platform with Go and MongoDB that maintains bank records, which increased the payment transaction success rate by a significant percentage

Contributor and Mentor, RepoSense [repository]   Jan 2021 - May 2023
- Added new features such as highlighting and binary format support with Vue.js, Pug, and css, which enhanced the user interface of RepoSense, a contribution analysis tool of Git repositories
- Maintained the project, reviewed close to 100 pull requests, and made 5 product releases, which ensured it runs smoothly with 10 active developers and more than 1000 active users

Backend Engineer Intern, Global Payment, ByteDance   May 2021 - Aug 2021
- Constructed an internal bot that monitors the transaction metrics from a TSDB and sends alerts to the engineers, alleviating the on-call team's burden and accelerating the error handling process

Developer Intern, Mobile Application**,** U Wave   May 2020 - Aug 2020
- Developed user interfaces for services such as module calendar and bus timing of U Wave with Flutter and Dart, which became new functionalities of the mobile application
- Collaborated in its campus promotion initiative, and invited NUS students to join its existing network of more than 10000 users on campus

ADDITIONAL INFORMATION

- **Skills**: Java, Python, C programming, PostgreSQL, Go, html, and css
- **Languages:** Chinese and English: Proficient; German: A1.2
- **Interests:** Basketball; Guitar; Drawing; Movies