CHENG GUO

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EDUCATION

University of California, San Diego, Jacobs School of Engineering, La Jolla, CA   **Expected June 2025**
Master of Science
Major: Computer Science
GPA: 3.87

University of Washington, College of Engineering, Seattle, WA   **Sept. 2019 - June 2023**
Bachelor of Science
Major: Human-Centered Design & Engineering (Data Science Option)
GPA: 3.82 (Dean's list - All Quarters)

Relevant Courses: Machine Learning; Natural Language Processing; Deep Learning; Introductory Computer Programming (Python, Java, C/C++, R); Data Structures and Algorithms; Algorithms and Computational Complexity; Design and Analysis of Algorithms; Computability and Complexity; Web Mining; Recommender Systems; Database Systems; Advanced Multivariate Calculus; Differential Equation; Matrix Algebra; Real Analysis; Probability; Elements of Statistical Methods; Statistical Methods in Engineering and Science; Interactive System Design; User-Centered Design; User Research

PUBLICATION

- Yanfu Liu, **Cheng Guo**, Sourojit Ghosh. (2025). Post-Editing vs Neural Machine Translation: A Comparative Study of English 🔄 Mandarin Translations in Daily Conversations. In The 27th International Conference on Human-Computer Interaction (HCII), 2025. [Accepted].

- **Cheng Guo**, Yanfu Liu, Yue Yuan, Wuhao Zhang, Sourojit Ghosh. (2024). Text Characteristics Vector: Rethinking Human-Centered Sentiment Analysis with Emotion-Related Text Characteristics. In The 26th International Conference on Human-Computer Interaction (HCII), 2024.

- Sourojit Ghosh, Murtaza Ali, Anna Batra, **Cheng Guo**, Mohit Jain, Joseph Kang, Julia Kharchenko, Varun Suravajhela, Vincent Zhou, and Cecilia Aragon. (2023). "Do we like this, or do we like like this?" : Reflections on a Human-Centered Machine Learning Approach to Sentiment Analysis. In International Conference on Human-Computer Interaction, pp. 63-82. Cham: Springer Nature Switzerland, 2023.

- Yunhe Feng, **Cheng Guo**, Bingbing Wen, Peng Sun, Yufei Yue, and Dingwen Tao. (2022). EmojiCloud: a Tool for Emoji Cloud Visualization. In Proceedings of the 5th International Workshop on Emoji Understanding and Applications in Social Media at 2022 Annual Conference of the North American Chapter of the Association for Computational Linguistics (EMOJI@NAACL), pp. 69-74. 2022.

RESEARCH EXPERIENCE

LLM Interpretability and Causal Inference Benchmark Dataset Project, University of California, San Diego, CA, *Student Researcher*   **Apr. 2024 – Present**
- Initiate research project with the help of Dr. Amir Feder at Columbia University
- Develop prompting strategy for ChatGPT on generate counterfactuals based on a causal graph
- Generate counterfactual senator tweets and speech as if they come from a senator of another identity with ChatGPT and analyze their political ideology

Human-Centered Natural Language Processing Directed Research Group, University of Washington, Seattle, WA, *Research Assistant*   **Jan. 2022 – July 2023**
- Collaborate with a team of 9 peers working on the Emotion Classifier Project under Prof. Cecilia Aragon
- Program in Python with the UW Hyak supercomputer to classify emotions with a 672 GB text dataset
- Lead a team of 5 peers researching sentiment classification with text characteristics (like capitalizations or exclamation marks) with qualitative coding, program in Python, and write paper published in HCII 2024
- Work in a team of 3 peers researching post-editing and neural machine translation between English and Mandarin in daily conversations with qualitative coding translated scripts and user interview

InfoSeeking Lab, University of Washington, Seattle, WA, *Research Assistant*   **Apr. 2021 – May 2022**
- Develop EmojiCloud, a tool for emoji cloud visualization with Dr. Yunhe Feng
- Collaborate with a team of 10 peers on developing an intelligent agent for cellphones under Prof. Chirag Shah by research stakeholders, develop personas, scenarios, and project boards, coordinate with other members to formulate agenda based on key initiatives.

SKILLS

Programming: Python, Java, C/C++, R, Javascript, HTML/CSS, SQL, LaTeX, MATLAB
Software: PyTorch, TensorFlow, Microsoft Azure AI Platform, Amazon Mechanical Turk, SLURM Workload Manager
Language: English (Fluent), Chinese (Native), German (Elementary)

VOLUNTEERING EXPERIENCE

Volunteer at the 2024 International Conference on Human-Computer Interaction (HCII), Washington DC   **Jul. 2024**

Volunteer at the 2022 Annual Conference of the North American Chapter of the Association for Computational Linguistics (NAACL), Seattle, WA   **Jul. 2022**

Additional Experience

Burke Museum Accessibility Design Project, University of Washington, Seattle, HCDE 318 Class Project   **Sept. 2021 – Dec. 2021**
- Collaborate with a team of 4 peers working on creating a plan for accessibility design for Burke Museum at UW, Seattle
- Interview officials and perform field research in the museum on improving experience for disabled groups
- Develop personas, user journey map, and prototype a webpage that includes accessibility information of the museum with a QR code placed at the entry that disabled visitors can easily access when they are in the museum

LinkedIn User Interface Redesign Project, University of Washington, Seattle, HCDE 301 Class Project   **Apr. 2022 – June 2022**
- Collaborate with a team of 6 peers working on redesigning the LinkedIn User Interface for better user experience
- Interview officials from LinkedIn on current design and brainstorm ways for better job search specifically for college students
- Prototype a new user interface that enhance job search experience for college students on LinkedIn

UW Student Organization Booths User Research Project, University of Washington, Seattle, HCDE 313 Class Project   **Apr. 2022 – June 2022**
- Work in a team of 2 peers on user experience around student organization booths at UW Kane Hall
- Perform observational study, interview both booth organizers and visitors, create and distribute surveys on visitor experiences
- Analyze text data with qualitative coding and report on user experience around student organization booths

UW Sports Video UX Design Project, University of Washington, Seattle, HCDE Undergraduate Capstone Project   **Jan. 2023 – June 2023**
- Work in a team of 2 peers on creating videos for the UW athletes on their sports career in the University
- Design a plan with details on a user research around UW athlete experience and on creating videos reflecting sport spirit at UW
- Interview a football player and perform field research at UW Husky Stadium on how athletes balance between study and sports
- Create a 5-minute video around the football player's experience and report to the UW HCDE community