# WENJIE (JACKY) MO

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## **EDUCATION**

Bachelor of Computer Science, University of Southern California, GPA: 3.8/4.0 Awards:

- CURVE Undergraduate Research Fellowship (top 2%), on Natural Language Processing (NLP)
- USC Dean's List 2020, 2021, 2022 (top 10%)

Coursework: Software Engineering, Algorithm and Theory of Computing, Data Structure and Object Oriented Design, Artificial Intelligence, Computer System

## SKILLS

NLP and Deep Learning Related: PyTorch, HuggingFace Transformers, spaCy, AllenNLP Frameworks: Node.js, React.js, SQL, MongoDB, Pandas, Git, Unix **Programming Languages:** Java, C++, Python, JavaScript, CSS, HTML, XML

# SOFTWARE ENGINEERING EXPERIENCE

#### Software Engineer

Shanghai Sheyuan Network Technology

- Worked on mobile full-stack development on Mubu, an app for collecting and analyzing user sentiment data from users' dairy; consultation and suggestions for users will be presented by a visual cartoon character–Mubu.
- Developed visualization and explanation of the result of NLP model in front-end using Flutter in Android Studio.
- Integrated a trained sentiment-analysis model from HuggingFace for predicting users' emotions with Pytorch; developed a feature to improve users' mental health based on sentence-to-sentence analysis of users' diaries.
- Helped to publish the mobile app in the Apple store and has received hundreds of installations nationwide.

## **Trojan Scheduler**

- Built a website for USC students to choose GE classes based on schedules and info of the class, including scores of all GE professors – data scraped from the website– Rate My Professor – using the python library beautiful soup.
- Used React to build several cardinal-red (USC style) web pages to collect data on students' schedules and present results of recommended classes; used SQL to manage user information and selected classes.
- The project scored 100/100 in class; and it's under the plan of publishing.

# Movie Search Engine

- Designed and developed a movie searching engine to help users organize and collect movie information
- Integrated the TMDB movie API to retrieve accurate and up-to-date data, including title, release date, genre, actors, and descriptions; utilized SQL to efficiently manage the database, ensuring fast data retrieval and storage.
- Created a user-friendly interface, ensuring an intuitive user experience; implemented algorithms to generate recommended movies based on users' history and provide visually appealing montages from their movie lists.
- Adhered to Test Driven Development(TDD) practices; employed a combination of Scrum and waterfall development processes throughout the entire project, ensuring efficient and timely delivery.

# **RESEARCH EXPERIENCE**

#### LUKA Lab NLP Research Assistant

University of Southern California, Advisor: Muhao Chen

- Conducted research on entity bias in pretrained language models, exploring its influence on prediction fidelity.
- Co-authored a paper titled "A Causal View of Entity Bias in (Large) Language Models," which has been published on arXiv and is targeted the next EMNLP conference.
- Investigated the challenges of addressing entity bias, particularly the reliance of language models on biased parametric knowledge and the limitations of estimating parameters in practical scenarios.
- Proposed a structured causal model (SCM) to mitigate entity bias, focusing on easier parameter estimation and developing causal intervention techniques for both white-box and black-box language model settings.

#### **Undergrad NLP Research Assistant**

University of Southern California, Advisor: Mohammad Rostami and Xuezhe Ma

- Extracted verbs and adjectives from movie plots across different countries, e.g., US, UK, and India.
- Used spaCy to extract words, researched and applied semantic role labeling (SRL) models from AllenNLP on collected movie plot corpus, applied the odds ratio to extract gender-distinct events and event chains.

February 2023 - April 2023

August 2022 - Present

January 2022 - May 2022

Los Angeles, CA

Los Angeles, CA

October 2022 - December 2022

Shanghai, China (Remote)

June 2022 - August 2022

2020-2024 (expected)