

CHENCHEN YE

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EDUCATION

PhD student in Computer Science, University of California, Los Angeles (UCLA) Sep 2023 - Present
Advisor: Dr. [Wei Wang](#), Leonard Kleinrock Professor, UCLA

Bachelor of Computer Science, National University of Singapore (NUS) Aug 2018 - Jun 2022
1st Class Honors (Highest Distinction)
Advisor: Dr. [Tat-Seng Chua](#), KITHCT Chair Professor, NUS

RESEARCH INTERESTS

My research interests include Machine Learning, Data Mining, Natural Language Processing, and Graph Neural Networks, with the current focus on **knowledge reasoning over large language models and knowledge graphs**. Specifically, I aim to develop models that can reason over **heterogeneous knowledge**, coordinate the structured and unstructured, and generate appropriate forecasts and interpretations.

PUBLICATIONS

(* denotes equal contribution.)

- Context-aware Event Forecasting via Graph Disentanglement**
Yunshan Ma*, [Chenchen Ye](#)*, Zijian Wu, Xiang Wang, Yixin Cao, Tat-Seng Chua
SIGKDD 2023 [[paper](#), [code&data](#), [poster](#), [slides](#)]
- Reflecting on Experiences for Response Generation**
[Chenchen Ye](#), Lizi Liao, Suyu Liu, Tat-Seng Chua
ACMMM 2022 [[paper](#), [poster](#), [slides](#), [video](#)]
- Structured and Natural Responses Co-generation for Conversational Search**
[Chenchen Ye](#), Lizi Liao, Fuli Feng, Wei Ji, Tat-Seng Chua
SIGIR 2022 (Oral) [[paper](#), [code](#), [slides](#), [video](#)]

Preprints:

- Structured, Complex and Time-complete Temporal Event Forecasting**
Yunshan Ma*, [Chenchen Ye](#)*, Zijian Wu, Xiang Wang, Yixin Cao, Liang Pang, Tat-Seng Chua

EXPERIENCE

Graduate Student Researcher Sep 2023 - Present
[Scalable Analytics Institute \(ScAi\)](#), UCLA, Advisor: [Wei Wang](#) *Los Angeles, CA*

Project: Temporal Reasoning of LLMs for Events over Texts, Images, and Knowledge Graphs

- Proposed three QA tasks (MultiChoiceQA, OrderQA, ForecastQA) and constructed an LLM-based automated pipeline for benchmarking LLM's time-aware cross-document understanding capability on temporal events.
- Focusing on the turning points in temporal event development for examining LLM's temporal forecasting ability.
- Working on human-centric LLMs that can provide interpretable and trustable event forecasting results with multimodal reasoning and explanations (texts, images, structured KGs).

Project: Biomedical Hypothesis Extraction and Generation with LLMs

- Working on leveraging LLMs for knowledge discovery and hypothesis generation in biomedical literature mining by developing a new task formulation and benchmark dataset and proposing a novel retrieval-augmented cross-document hypothesis generation framework.

Research Assistant

Aug 2022 - Aug 2023

NExT++ Research Center, NUS, Advisor: [Tat-Seng Chua](#), [Yunshan Ma](#)

Singapore

Project: Learning and Reasoning on Graphs for Knowledge-enhanced Information Retrieval

- Proposed a novel task of context-aware event forecasting over temporal knowledge graphs and textual contexts; constructed three large-scale benchmarks and designed a new framework using graph disentanglement for context-specific relational and temporal modeling and hypergraphs for cross-context collaborative modeling.
- Developed an innovative LLM-based automated pipeline for the construction of structured, complex, and time-complete temporal events from extensive news data, and designed a novel temporal knowledge graph-based model that leverages both local and global contextual information for this new event forecasting formulation.

Undergraduate Student Researcher

May 2021 - Jun 2022

NExT++ Research Center, NUS, Advisor: [Tat-Seng Chua](#), [Lizi Liao](#)

Singapore

Project: Textual and Multimodal Conversational Search and Response Generation

- Incorporated supervised multitask learning and reinforcement finetuning in building a novel conversational search agent that co-generates structured search states for system optimization and natural language responses for users.
- Designed a neural case-based reasoning model for task-oriented multimodal dialogues and enhanced its performance with contrastive learning for multi-modality retrieval and copying mechanism for response generation.

AWARDS

Outstanding Undergraduate Researcher Prize, NUS

Jun 2022

Best undergraduate researcher (individual) in the **university-wide selection** [[certificate](#)] [[news](#)]

Deans' List Awards, NUS

AY2019-2020/ AY2021-2022

Top 5% of the cohort [[certificate](#)]

Distinction in the Multimedia Information Retrieval Focus Area, NUS

Aug 2021

Meritorious academic performance in Information Retrieval [[certificate](#)]

Distinction in the Artificial Intelligence Focus Area, NUS

Apr 2021

Meritorious academic performance in Artificial Intelligence [[certificate](#)]

Science & Technology Undergraduate Scholarship, NUS & Ministry of Education, Singapore

2018-2022

Outstanding Asian student, covers full tuition fees and living allowance

TEACHING

Teaching Assistant, NUS

Semester 1 AY2019/20

- CS2030 Programming Methodology II, Lecturer: Dr. [Henry Chia](#)
- CS2040 Data Structure and Algorithm, Lecturer: Dr. [Chong Ket Fah](#)

SERVICES

Reviewer **2023**: ACM MM, ACM MM MIR

SKILLS

Programming Languages: Python, Java, C++, C, SQL, R, Matlab

Software & Other IT Skills: PyTorch, Git, Linux, Tableau