XI CHEN

xchen4@umass.edu(citations 200+) ⋄ https://melongone.github.io/

EDUCATION

University of Massachusetts Amherst — **Amherst, MA**
- PhD in Computer Science (GPA: 3.9/4) — 2019-present

Central South University — **Changsha, China**
- B.E. in Computer Science (GPA: 3.9/4) — 2014-2018

EXPERIENCE

University of Massachusetts Amherst — **Amherst, MA**
Research Assistant — 2019.9 - present
- Zero-shot learning for large language model to identify global news covering disasters.
- Refined a state-of-art transformer model to analyze global news graph with trillions of edges.
- Quantified country effects on news similarity with greedy factor selection, event clustering, and regression.
- Developed a large dataset of multilingual news article pairs with human-in-the-loop active learning framework.

University of California, Los Angeles — **Los Angeles, CA**
Research Intern — 2018.7 - 2018.12
- Predicted social links by probabilistic graph time series with psychological latent variable.
- Devised an extended EM algorithm for learning the graph time series and get state-of-the-art performance.

Zhipu AI (Chinese OpenAI) — **Beijing, China**
Research Intern — 2018.3 - 2018.9
- Disambiguated scholars with heterogeneous random forest (deployed on prestigious AI platform Aminer).
- Cluster and visualize temporal scientific topics with refined genetic algorithm.

Briup Technology corporation — **Jiangsu, China**
Software Engineer Intern — 2017.6 - 2017.8
- Developed a server-client smart traffic system on sand table as to route optimization.

PROJECT

LLM Question Answering Generation for Identifying Global Disasters
- Zero-shot learning prompts for GPT4's precision and recall on identifying global news covering disasters.
- Built regression models to quantify country factors with greedy feature selection and event clustering.

Large-scale Multilingual News Graph Learning
- Extract cross-lingual name entities with Spacy, Polyglot, and Wikipedia concepts.
- Recall, pre-rank, and rank similar news article pairs based on rules and active learning classifiers.
- Predict global news network for trillions of pairs with refined multilingual transformer and bi-directional index.

Large-scale Temporal-geographical Social Polls Learning
- Cluster large-scale texts of Twitter polls into social issues over time with quality evaluation.
- Quantify and visualize the evolution of public opinions on social issues with statistical analysis.

Personalized Opinion Graph Time Series Learning
- Modele the dynamics of opinions and personalities with probabilistic graph time series.
- Devise an extended EM algorithm for learning the graph time series and get competitive performance.

Symbolic Math Expression Learning
- Built a sequence-to-sequence model to compute partial differential of formula.

SELECTED PUBLICATION

International News Synchronization during Covid-19 Pandemic
Xi Chen, Scott Hale, David Jurgens, Mattia Samory, Ethan Zuckerman, Przemyslaw Grabowicz. International World Wide Web Conference (The WebConf), 2024.

Detecting Global Disaster Event with Question Answering on Large Language Model
Xi Chen*, Erica Cai*, Brendan O'connor, Przemyslaw Grabowicz. Submitted to International AAAI Conference on Web and Social Media (ICWSM), 2024.

A Multilingual News Similarity Dataset for Media Network and Bias Research
Xi Chen, Scott Hale, David Jurgens, Mattia Samory, Przemyslaw Grabowicz. International AAAI Conference on Web and Social Media (ICWSM), 2023.

Multilingual Document-level Similarity
Xi Chen, Ali Zeynali, Chico Camargo, Fabian Flock, Devin Gaffney, Przemyslaw Grabowicz, Scott Hale, David Jurgens, Mattia Samory. International Workshop on Semantic Evaluation (at NAACL), 2022.

Modeling Personalized Dynamics of Social Network and Opinion at Individual Level
Xi Chen, Jie Tang, Yizhou Sun. Preprint on Arxiv, 2019.

Dynamic power management and adaptive packet size selection for IoT in e-Healthcare
Xi Chen, Ming Ma, Anfeng Liu. Computers & Electrical Engineering, 2018.

Cross Layer Design for Optimizing Transmission Reliability, Energy Efficiency, and Lifetime in Body Sensor Networks
Xi Chen, YiXuan Xu, Anfeng Liu. Sensors, 2017.

A Latency and Coverage Optimized Data Collection Scheme for Smart Cities Based on Vehicular Ad-hoc Networks
Yixuan Xu, **Xi Chen**, Anfeng Liu, Chunhua Hu. Sensors, 2017.

SKILL

PhD Courses: Machine Learning, Optimization, Natural Language Processing, Database, Algorithm
Programming Language and framework: Python, C/C++, R, Pytorch, Spark, Java, SQL, Linux, Matlab

SERVICE

Program Commmittee Member:

- NAACL(2023)
- ICWSM(2023, 2024)
- SEMEVAL (2022, 2023, 2024)
- IC2S2 (2022, 2023, 2024)

HONOR

NSF Student Travel Award, 2024
IC2S2 plenary session (top 2.8% research), 2024
UMass CICS best portfolio finalist, 2023.
Presentions at top-tier computer science venues (Webconf 2024, NAACL 2022, TADA 2023, IC2S2 2022-2024).
Nomination for Chinese Exceptional Student (1/6500 ISchool undergrads and grads), 2018.
Ranked global Top50 of Autochess players (50/millions, a world-class strategy game).