

# XI CHEN

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## EDUCATION

<b>University of Massachusetts Amherst</b>	<b>Amherst, MA</b>
• PhD in Computer Science (GPA: 3.9/4)	2019-present
<b>Central South University</b>	<b>Changsha, China</b>
• B.E. in Computer Science (GPA: 3.9/4)	2014-2018

## EXPERIENCE

<b>Amazon (AGI foudation)</b>	<b>Seattle, WA</b>
<b>Applied Scientist Intern</b>	2024.7 - 2024.10
<b>(Incorporated into Amazon internal LLM with a ICML submission, saliently beat existing methods).</b>	
• Parameter efficient parallel training for large language models with Quantized LoRA.	
• Merged large language models by aligning activation to accelerate multi-task learning	
• Online learning with adaptive model-dependent sample importance.	

<b>University of Massachusetts Amherst</b>	<b>Amherst, MA</b>
<b>Research Assistant</b>	2019.9 - present
• Zero-shot learning for large language model to retrieve global news covering disasters.	
• Built a state-of-art transformer model to analyze global news graph with trillions of edges.	
• Developed the largest dataset of multilingual news article pairs with human-in-the-loop active learning framework.	
• Designed a cluster-wise active learning framework for extracting events from temporal graph of social texts.	
• Quantified country effects on news similarity with greedy factor selection, event detection, and regression.	

<b>University of California, Los Angeles</b>	<b>Los Angeles, CA</b>
<b>Research Intern</b>	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.	

<b>Zhipu AI (Chinese OpenAI)</b>	<b>Beijing, China</b>
<b>Research Intern</b>	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.	

## PROJECT

<b>Merge LLM with Online Activation Alignment</b>
• Align activation spaces across LLMs on multi-tasks (e.g. math, coding, and medical).
• Adapt activation weight during parameter-efficient training and sampling for LLM online learning.
<b>LLM Question Answering Generation for Identifying Disasters</b>
• Zero-shot learning prompts for GPT4's precision and recall on searching global news covering disasters.
• Built regression models to quantify country factors with greedy feature selection and event clustering.
<b>Global Multilingual News Graph Learning</b>
• Extract cross-lingual entities 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.
<b>Active learning for temporal events from Social Polls</b>
• Design a cluster-wise active learning framework to recognize temporal events from Twitter poll texts.
• Quantify the evolution of public opinions on social issues with statistical analysis.
<b>Personalized Opinion Graph Time Series Learning</b>
• Model 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.

## SELECTED PUBLICATION

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### Adaptive Activation Alignment for Merging Large Language Models

**Xi Chen**, Yue Zhang, Akshaya Shanbhogue. Submitted to International Conference on Machine Learning (**ICML**), 2025.

### International News Synchrony and Diversity during the Start of Covid-19

**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.

### Cluster-wise Active learning for Event Identification from Social Polls

**Xi Chen**, Mayank Bumb, Vishal Kalakonnar, Przemyslaw Grabowicz. To appeal, 2024.

### A Multilingual Similarity Dataset for News Article Frame

**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 (**@NAACL**), 2022.

### Modeling Personalized Dynamics of Social Network and Opinion at Individual Level

**Xi Chen**, Jie Tang, Yizhou Sun. Preprint on Arxiv, 2019.

## SKILL

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**Technique:** Large Language Model, Natural Language Processing, Machine Learning, Optimization, Information Retrieval, Data Science, Database

**Programming Language and framework:** Python, C/C++, R, Pytorch, Spark, Java, SQL, Linux, Matlab

## SERVICE

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### Program Member:

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

## HONOR

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NSF Student Travel Award, 2024

UMass CICS best portfolio finalist, 2023.

Research presented at top-tier computer science venues (Webconf, NAACL, ICWSM, TADA, IC2S2).

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).