

# Zhuowei Chen

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## EDUCATION

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### Guangdong University of Foreign Studies (GDUFS)

Guangzhou, China

- B.E. in Software Engineering
- GPA: 3.80/4.00, Ranking: 7/144

*Sept 2021 - June 2025*

### University of California, Berkeley (UCB)

Berkeley, CA

- Courses: Natural Language Processing, Intro to AI, Computer Security
- GPA: 4.00/4.00

*Aug 2023 - Jan 2024*

## PUBLICATIONS

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\* represents equal contributions and † represents the corresponding author.

1. Lianxi Wang, Yujia Tian\*, **Zhuowei Chen**\*†.  
Enhancing Hindi Feature Representation Through Fusion of Dual-Script Word Embeddings  
Proceedings of the 2024 Joint International Conference on Computational Linguistics.  
LREC-COLING 2024 (Long-paper, Main Conference)
2. **Zhuowei Chen**, Yujia Tian, Lianxi Wang†, Shengyi Jiang.  
A Distantly-Supervised Relation Extraction Method Based on Selective Gate and Noise Correction  
China National Conference on Chinese Computational Linguistics, 2023.  
CCL 2023 (Long-paper, Main Conference)
3. Lianxi Wang, Huayu Huang, **Zhuowei Chen**†.  
LAKA: A Label-Aware and Knowledge-Augmented Framework for Multi-Label Text Classification  
(Current ARR cycle)
4. **Zhuowei Chen**, Yuben Wu, Xinfeng Liao, Yujia Tian, Lianxi Wang†.  
An Effective Deployment of Diffusion LM for Data Augmentation in Low-Resource Sentiment Classification  
(Current ARR cycle)
5. Lianxi Wang, **Zhuowei Chen**\*, Yujia Tian\*, Mutong Li, Nankai Lin†.  
EditMDS: An Iterative Optimization Method for Multi-Document Summarization Based on Edit Operations  
(Under review of NLPCC 2024)

## RESEARCH EXPERIENCE

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### University of Massachusetts Boston

Boston, MA

*Research Intern*

*March 2024 – Present*

Supervisor: Dr. Shichao Pei

### Guangzhou Key Laboratory of Multilingual Intelligent Processing

Guangzhou, China

*Undergraduate Research Student*

*Nov 2021 – March 2024*

Supervisor: Prof. Lianxi Wang

- BiasLLM: Adversarial Knowledge Editing Attacks on LLMs.
  - Combined GNN with model editing to attack Llama-2, exposing significant bias, highlighting the vulnerability of LLMs to adversarial knowledge editing, and stressing the need for robust countermeasures.
- Deploying Diffusion LM for Data Augmentation in Text Classification. (ARR June)
  - Fine-tuned LMs with a diffusion objective to capture in-domain knowledge and generate samples by reconstructing label-related tokens, balancing domain consistency, label consistency, and diversity. Revealed the potential of diffusion LM for textual data augmentation.

- Multi-Label Text Classification with Knowledge Augmentation and Span Prediction. (ARR June)
  - Proposed a multi-label text classification method that casts multi-label prediction to span prediction with a knowledge-augmentation module integrated, stressing the importance to the LM of the introduction of domain-specific knowledge.
- Enhancing Hindi Representations via Fusion of Pre-trained Language Models. (COLING 2024)
  - Proposed a method to enhance Hindi feature representation by combining Devanagari and Romanized Hindi pre-trained language models, demonstrating the potential of multi-script integration for improving low-resource LMs.
- Distantly Supervised Relation Extraction (DSRE) with Learning-with-Noise Methods. (CCL 2023)
  - Integrated selective gates and a noise correction training framework, which performs data selection and corrects noise labels during a three-stage training process for DSRE model. Discovered a promising way for training-with-noise methods in NLP.

## SELECTED PROJECT

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- Multimodal NLP: Image-Text Interfacing with CLIP and Rational Speech Acts.
  - Used the CLIP model for image and caption retrieval, enhancing performance through parameter tuning and model optimization, and further improved retrieval effectiveness by developing and applying a Rational Speech Acts inference procedure.

## WORK EXPERIENCE

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### AI Lab, Wisers Information Ltd.

*NLP Research Intern*

Hong Kong, China

*Dec 2023 - Mar 2024*

- Quantization of Hong Kong Tourism Popularity.
  - Built sentiment and spam classification models from human-annotated social media content using BERT-family PLMs, and applied transformers for time series regression to predict the number of arrivals from social media content statistics.

## SELECTED HONORS

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- First-class Scholarship (Top 4%) GDUFS Academic Scholarship, 2023
- Gold Medal Guangdong College Computer Design Competition, 2022
- Silver Medal National College Student Mathematical Modelling Competition, 2023
- Silver Medal (Top 5%) National College Computer Design Competition, 2022

## OTHER RELATED EXPERIENCE

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- **Conference Participant.** Poster and oral presentation on *LREC-COLING 2024* and *CCL 2023*.
- **Teaching Assistance.** TA for Language Processing Technique.

## TECHNICAL SKILLS

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- **Programming:** Python, Java, JS/HTML/CSS, C/C++, SQL, Golang.

## EXTRACURRICULAR ACTIVITIES

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- **Member of Publicity at Student Union, GDUFS** *Sept 2021 - June 2022*  
Scheduled and organized poster presentations promoting AI equity.
- **Volunteer Lecturer at Dongguan Library** *Oct 2022 - Dec 2022*  
Introduced basics of AI to the public.