



Xin CHEN

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1999-04 Male
Shenzhen, China



RESEARCH INTEREST

Natural Language Processing, Large Language Models and Data Science

EDUCATION

University of Southampton (QS Top100) - Business Analysis and Finance Master Sep 2022 - Feb 2024

Major courses: **Python & Forecasting(82)**, **Advanced Analytics(72)**, **Credit Risk & Data Analytics(67)**, Quantitative Research in Finance.

Dissertation Title: Augmented FinQA: In-context Learning in Finance based on the Integration of LLMs and Knowledge Base

Beijing Normal University, Zhuhai - Information Management and Information System Bachelor Sep 2018 - Jul 2022
GPA: 87/100 (TOP 10%)

Major courses: **Statistics (97)**, **Data Analysis and Application(96)**, **Business Data Mining(90)**, SQLServer Database, Model and Decision making, Management, Economics.

Dissertation Title: The Presentation and Evolution of Youth's National Identity based on Topic Modeling

Professional Scholarship for 3 years, **Social Work Scholarship**, **Outstanding Graduates**, and **Top Ten Graduate Nominee Award (13th)**

TECHNICAL SKILL

- **English Level:** CET-6(464), IELTS(Pre-Sessional course in 7.0(6.5))
- **Programming Languages:** Python, Java, C
- **Development Framework:** SpringBoot, React.js, Flask
- **DB Tools:** Neo4j, MySQL, Oracle
- **Libraries:** Scikit-Learn, PyTorch, Keras, TensorFlow, Jena, Echarts, HanLP, Pandas, NumPy, Matplotlib

RESEARCH EXPERIENCE

Analysis of the Presentation and Change of Youth's Sense of National Identity in the Context of COVID-19 -- Based on the Danmaku Corpus of Bilibili & Research on the Regularity of Youth Subcultural Phenomenon Based on Danmaku Corpus - Project Leader Jun 2020 - Apr 2023

- Analyzed the storage mechanism of video and danmaku text on Bilibili to build a type-channel relationship network and design the efficient crawling algorithm of the diachronic danmaku corpus to collect about **45 million danmaku texts**.
- The **RoBERTa Model** trained from the Chinese Encyclopedia corpus was pre-trained using 40 million danmaku texts. This endeavor culminated in the specialized **Danmaku-RoBERTa Model** finely tuned for analyzing danmaku texts.
- **Biterm Topic Model** was built to extract the topic from the danmaku texts exploring the evolution of danmaku text topics by calculating the **Perplexity, Coherence and Rényi Entropy**.
- Combined with the sense of national identity to explore the **national identity evolution of danmaku text** under the background of COVID-19

Construction and Visualization of Knowledge Graph of Guangzhou Revolutionary Historical Events & Visualization and Application of Knowledge Graph for "The Red Culture" - Taking the Long March Red Culture Education as an Example - Project Back-end Engineer Jun 2019 - Dec 2021

- Integrated **Mybatis, Mysql** and **Jena** to build the data interaction mode based on the Springboot framework.
- Designed and wrote **SPARQL** retrieval sentences to retrieve and extract knowledge from the graph database constructed by **Protégé** based on the spatial-temporal retrieval model proposed by the project.
- Used **full-text retrieval technology** to construct retrieval models for more than **2,000 historical documents**, realize all data structuring and improve retrieval speed and accuracy.
- Project URL: <http://8.135.49.164:7878> Software Copyright Registration No.: **2021SR1211614**

PAPER PUBLISHED

Jing Yang, **Xin Chen**, and Junchao Wu. Topic Extraction over Danmaku Text with Pre-training Model. In *3rd International Conference on Computer Application and Information Security (ICCAIS2023)*. (Accepted)

Xin Chen, Yixin Zhang, Junchao Wu, Lingyu Guo, Jiaxuan Chen, and Jing Yang. The Topic Evolution of DanmakuText Based on BTM --Taking the Context of COVID-19 as an Example. In *2022 IEEE 5th International Conference on Big Data and Artificial Intelligence (BDai 2022)*, pp. 176-183. IEEE. (Best Oral Presentation Award Paper)

Xin Chen, Yixin Zhang, Junchao Wu, Lingyu Guo, ZehuiYu, and Jing Yang. Construction and Analysis of Diachronic Danmaku Corpus –Taking Youth Subculture Danmaku as an Example. *Information Research*, 09 (2022), pp. 77-85. (In Chinese) (AMI)

Lingyu Guo, Junchao Wu, **Xin Chen**, Ying Jiang, and Zhizhu Geng. Research and Application of Digitalization of Long March Red Cultural Resources based on Knowledge Graph. *Electronic Technology & Software Engineering*, 04 (2022), 196-201. (In Chinese)

Junchao Wu, Ying Jiang, **Xin Chen**, LingyuGuo, XiaotongWei, and XiaoyanYang. "The Canton Canon" Digital Library Based on Knowledge Graph-Taking the Revolutionary Archives of Canton in the Republic of China as an Example." In *2021 IEEE 10th International Conference on Educational and Information Technology (ICEIT 2021)*, pp. 171-179. IEEE, 2021. (Best Oral Presentation Award Paper)

WORK EXPERIENCE

China Academy of Information and Communications Technology - Economic Data Researcher	Sep 2023 - Present
<ul style="list-style-type: none"> Developed an Industrial Value Forecasting Model based on the AutoARIMA, DeepAR, and TFT models with Wind Datasets. Optimized parameters through grid search to minimize RMSE. Built an Industrial Economic Monitoring and Warning Platform based on telecommunication big data based on the NiceGUI front-end framework combined with ECharts. 	
School of Management, Beijing Normal University, Zhuhai - Research Assistant	Nov 2021 - Mar 2022
<ul style="list-style-type: none"> Organized short-text topic model papers published by top journals or international conferences to build various short-text topic models including LDA, BTM, PTM, DMM, and WATM topic map extraction results in a summary report to the instructor. Organized the evaluated methods, like Perplexity, Coherence and Rényi Entropy, for short-text topic models evaluated on annotated data sets. Combinate Mybatis and Mysql based on Springboot to build an analysis platform for public opinion. 	

HONOR & AWARD

The First "Jingshi Cup" Extracurricular Academic Science and Technology Competition on Zhuhai campus of Beijing Normal University —— First Prize for Philosophy and Social Science Work	Jul 2022
The 8th “Challenge Cup” College Students’ Extracurricular Academic Science and Technology Works Competition in Beijing Normal University, Zhuhai —— Third Prize for Philosophy and Social Science Work	Jul 2020
China Undergraduate Mathematical Contest in Modeling —— Third Prize for Guangdong Province	Dec 2019
The 7th "Teddy Cup" Data Mining Challenge —— First Prize for Guangdong Province and Second Prize for Nationality	Jul 2019

ORGANIZATION

2018-2020 Student Union in School of Management - Director & Member Publicity Department	Sep 2018 - Sep 2020
<ul style="list-style-type: none"> Awarded the title of 'Excellent Member' in 2018 and the 'Outstanding Contribution Award' honor certificate in 2020 	

FUND

Special Fund for Science and Technology Innovation Cultivation of Guangdong University Students (No. pdjh2021b0612, PI)
Innovation Project of Universities in Department of Education of Guangdong Province (No. S202013177023, PI)
Innovation Project of Universities in Department of Education of Guangdong Province (No. S202013177021, Co-PI)
Innovation Project of Universities in Department of Education of Guangdong Province (No. S201913177034, Co-PI)