ZHIYUN LIANG

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EDUCATION

China Agricultural University **Sept. 2020 – July 2024**

Bachelor of Science in Data Science and Big Data Technology *Beijing, PR China*

- **GPA**: 3.80/4.00
- **Core Courses**: Linear Algebra (3.7), Probability Theory (4.0), Statistical Learning Theory (4.0), Data Structure (4.0), Algorithms Design and Analysis (4.0), Computer Organization & Architecture (4.0), Principles of Database Systems (4.0), Artificial Intelligence (4.0)
- **Awards**: Second-class Academic Scholarship Scholarship (2022), Academic Progress Scholarship (2022)

SKILLS SUMMARY

Programming: Python, Java, C, C++, SQL, Markdown
Frameworks: PyTorch, PaddlePaddle, Scikit-Learn
Developer Tools: MySQL, Unity, VS Code, Eclipse
English: GRE: 325(156+169), CET-6: 561
Soft Skills: Event Management, Teamwork, Time Management, Self-Motivation

PUBLICATIONS

- Yihe Liu, Ziqi Yuan, Huisheng Mao, Zhiyun Liang, Wanqiuyue Yang, Yuanzhe Qiu, Tie Cheng, Xiaoteng Li, Hua Xu, Kai Gao
  Make Acoustic and Visual Cues Matter: CH-SIMS v2.0 Dataset and AV-Mixup Consistent Module
  *Twenty-Fourth ACM International Conference on Multimodal Interaction (**ICMI**), 2022, Oral.*

RESEARCH EXPERIENCE

State Key Laboratory of Intelligent Technology and Systems, Tsinghua University **Mar. 2022 – Present**

Research Intern *Beijing, PR China*

- Participated in the construction of CH-SIMS v2.0 and v3.0 datasets, and carried out frame-level annotations on CH-SIMS v3.0 to reflect the fine-grained temporal changes of the speaker's sentiment.
- Conduct literature research in the field of multi-modal sentiment analysis and try to re-implement them to reproduce the results.
- Participate in the design of multi-modal model to realize continuous sentiment analysis, predict the temporal changes of the speaker's sentiment, and improve the interpretability of multi-modal model to a certain extent.

Global Education, Academics and Research Skills Program (GEARS), North Carolina State University **Jan. 2022 – Feb. 2022**

Participant *Remote*

- Analyzed the carbon emission trend and the factors affecting the carbon emissions of the logistics industry based on the data from Emissions Database for Global Atmospheric Research (EDGAR) and U.S. Environmental Protection Agency (EPA).
- Introduced Comparative Study on Urban Transport and the Environment (CUTE) to explore the carbon emissions in the process of logistics transportation and used Input-Process-Output (IPO) model to track the indirect carbon emissions of logistics industry.
- Proposed reasonable measures to reduce the carbon emissions of logistics enterprises combining the examples of JD Logistics and Amazon.

PROJECTS

Data Analysis of Agricultural Machinery | *Python, Selenium, Flask* **July 2022**

- The demand of the project came from the research related to the development of agricultural mechanization in China.
- Identified the data source, analyzed the source code of the target website, and automated the browser to crawl the required data using Selenium WebDriver.
- Stored, cleaned and summarized the crawled data, and analyzed the changes of agricultural machinery purchase quantity and subsidies in China's provinces and cities from 2018 to 2022.
- Combined Flask and ECharts to visualize the data, and used the form of maps to present the analysis results, providing a reference basis for further research.

Restaurant Reservation System | *MySQL, Python, JavaScript* **May 2022 – June 2022**

- The system was developed based on the requirements of the customers and the managers of the restaurant.
- Designed the database architecture and established the restaurant information database using MySQL.
- Transferred back-end data to front-end for data processing and visualization, and designed Web pages and statistical charts to facilitate the management staff to master the operation of the restaurant.
- Developed a user-oriented Android application, which realized simple registration, login and order functions, and ensured real-time synchronization of program data and background data.

3D Alpine Skiing Simulation Game | *Unity, C#, Wii Remote* **Mar. 2022 – Present**

- Imported character models from Adobe Mixamo, added Collider components for characters and designed character animations and camera perspective.
- Design the game UI, build the snow mountain terrain using Terrain toolbox, and render the game scene through Shader.
- The Wii Balance Board is imported as a peripheral to calculate the center of gravity of a person from sensor data, allowing the player to stand on the balance board and control the movement of the character by changing the center of gravity.

Olympic Games News Mini Program | *Java, Eclipse* **Aug. 2021**

- Crawled the Tokyo Olympic Games news website for medal count data and news information using the Jsoup toolkit.
- Used the Window Builder plug-in to design the Graphical User Interface, including the main interface, medal tally page and news content page.
- Realized the function of browsing part of the news, viewing the top few of the medal tally and searching the news by keywords in the main interface.