Haishuo Chen

Email：hchen727@wisc.edu | Mobile：6087707836

Address: 53711, 1910 Monroe Street, Apt. J, Madison WI

Education

University of Wisconsin-Madison, Data Science, Graduate *Sept. 2020 - Now*

- Master of Science in Data Science. Will graduate in 2022 Fall.
- Relevant courses: Statistical Inference, Statistical methods, Statistical learning, Database Management Systems.

Renmin University of China, Statistics, Bachelor's degree *Sept. 2017 – Jul. 2021*

- Course GPA:3.52/4.0
- One year's training in computer science major
- Relevant courses: Applied Regression Analysis, Introduction to Database System, Applied Stochastic Processes, Nonparametric Statistics, Multivariate Statistics, Computational Statistics, Time Series Analysis (R-based), Programming (C++), Investment.

Research and Coursework Experience

Coursework: Building database on B+ tree index

Core member *Feb. 2022*

- Use C++. Implement B+ tree index and data query for database and buffer manager for managing reading and writing in the heap.
- Write design report and analyze complexity. Use gdb to debug. Think about the design and give tests.

Coursework: text data analysis on Yelp review with Python

Team leader *Nov. 2021*

- Used text analysis tools with SciKit-learn such as word cloud to compare the review data of different businesses, also applied regression methods into constructing the businesses' assessment index.
- Applied text mining and sentiment analysis in the construction process to explore the information hidden in the review data.
- Build an automatic business report builder and used flask to build and deploy a website on web.

Paper: "Fish-lateral-inspired pressure sensing LSTM neural networks for underwater object identification"

Co-First Authors *Apr. 2021 - Aug. 2021*

- Proposed a new method on sensing in complex deep sea and the paper was published on OCEANS 2021.
- Learned and used processing and newest physical equation to simulate the motion of hydrofoil and cylinder in water. Designed the simulation experiment. Programmed with SciKit-learn and TensorFlow in Python to build LSTM-based neural network to train the underwater object identification model. Designed and tuned network structure and parameters. Tried different neural network models such as Conv-LSTM.

Practice: Participating in "Chinese General Social Survey" and "Beijing Air Pollution Survey"

"Data Bee" Interviewer *Jul. 2019*

- Used cluster random digit dialing to sample phone number and then give more than telephone interviews.
- Analyzed bias and sample errors from no response, sampling frame error, and double counting. Gave a successful project report.

Internship Experience

Machine learning engineer internship in Bairong Inc. *May. 2021 – Aug. 2021*

- Work on feature engineering by Python and combine the methods with real-world issues.
- Research on tree model deployment and model visualization theory by Shapley value. Reproduce part of Shap.
- Write a patent about tree model deployment.
- Explain the logic of Python projects to others and optimize it. Increase search speed fivefold with Python-Numpy.

Project manager assistant in China Electronics Technology Group Corporation International CO. LTD *Jul. 2018 – Aug. 2018*

- Cleaned the data related to different airplane exhibitions with excel. Doing administrative and clerical tasks.

Skills

- Language: Chinese (Native)
- Computer skills: C++ (Advanced beginner), Python (Proficient), R (Competent), SQL (Advanced beginner), Linux (Competent), git (Competent), java (beginner), gdb (beginner)
- ML libraries: numpy, pandas, SciKit-learn, Tensorflow, Pytorch
- Hobbies: Cooking, Weiqi (Go), HearthStone, Model United Nations