Zihao Chen

105 S Wright St, APT 305, Champaign, Illinois, 61820 / +1 (217) 480-2234 / zihaoc6@illinois.edu

Education

University of Illinois at Urbana-Champaign   May 2023 (Expected)

Bachelor of Science in Statistics   GPA:3.78/4.00

Relevant courses: Introduction to Computer Science (Java)**,** Statistics and Probability**,** Statistical Modeling**,** Econometrics, Method of Applied Statistics**,** Statistical Data Management**,** Time Series Analysis, Advanced Statistical Analysis, Applied Bayesian Analysis, Data Science Programming method (SAS), Statistics Programming Method, Stochastic Process

Project & Research Experiences

Harvard Mass General Hospital   **Grant Data Research**

June 2022 – Sep2022

- Cleaned grant applicant data using R dplyr and reformat applicant information for data base creation.
- Worked with team leader and learned to create name searching algorithm based on natural language processing and achieved a name matching rate of over 90%.

University of Illinois at Urbana Champaign, Department of Statistics   **Air Humidity Analysis**

April 2022 – May 2022

- Analyzed air humidity data in Champaign Urbana using time series analysis.
- Visualized time series trend of air humidity for 1000 consecutive hours and use R to model the trend using auto-regressive moving average model.
- Predicted the air humidity data of next 15 consecutive hours and attained an error rate of less than 7 percent.
- Presented the predictive results and overall analysis methods in class and achieved full grades in assessment.

University of Illinois at Urbana Champaign, Department of Statistics   **Bacteria Data Study**

April 2022 – May 2022

- Led a team of 4 and model the probability of being infected by influenza among children under 10 years old. Performed randomness check and verify validity of the original data source.
- Tested compliance effect and treatment effect and applied data visualization to compare the effect of level of compliance and treatment drug type on the result of influenza test.
- Performed model performance analysis and achieved a true positive rate of over 95 percent and a true negative rate of over 80 percent.
- Organized class report of the project and achieved top 10% in overall performance assessment

University of Illinois at Urbana Champaign, Department of Statistics   **Bubble wrap experiment**

Nov 2021 – Dec 2021

- Solved the problem of maximizing production rate and achieved this goal by building linear mixed statistical model using R.
- Applied 2-way ANOVA test combined with test for model assumptions to filter the optimal linear mixed model from 11 different hypothetical models. Used selected model and pairwise comparison to construct 99% percent family-wise confidence interval and suggested optimal values for each predictor variable.
- Increased the final production rate by more than 40 percent compared to the initial conditions.

Skills

Technical Skills R, Python, SAS, Data Visualization, Data Analysis

Languages Mandarin, English