HENGYUAN LIU

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EDUCATION

University of California, Davis — Davis, CA
Bachelor of Science in Statistics, Data Science (GPA: 3.75/4.00) — Sep. 2021 - Jun. 20 (Expected)
Courses: Data & Web Technologies for Data Analysis, Applied Time Series Analysis, Nonparametric Statistics, Linear Algebra, Linear Regression, Analysis of Variance

Los Rios Community College District — Sacramento, CA
(GPA: 3.90/4.00) — Jun. 2019 - Aug. 2021
Courses: Algorithm Design Implementation, Macroeconomics, Structured Programming C/C++
Honor: Recipient of President's Highest Honors

PROJECT EXPERIENCE

University of California, Davis
Project: Data Analysis of Pro. 30: Tax Millionaires for Electric Vehicle Programs
CA Election 2022 Data Challenge — Oct. 2022 - Nov. 2022
- Led a team of four in brainstorming for and summarizing California Air Resources Board data resources.
- Defined the proposal and organized communication between the twice-weekly zoom meetings.
- Predicted the number of Electric Vehicles and greenhouse gases in 2050 based on a specific tax.
- Interpreted the results and presented the conclusions regarding the recommendations on the Pro. 30.

Project: Data Analysis of 2019 NYC Airbnb Price — Apr. 2022 - Jun. 2022
- Organized a five-person team to determine the research purpose and assure its accurate implementation.
- Used linear regression in R to investigate the link between price and 16 other variables.
- Developed a function to produce a new median price variable based on the five most populous districts in New York City.
- Coded an R program to analyze and clean the data by residual plots and Model Selection (BIC/AIC).
- Displayed the prices of various districts on the maps of New York City, and interpreted their relationships in the final report paper.

Project: Data Analysis of COVID-19 from Cameroon, Africa in 2022 — Jan. 2022 - Mar. 2022
- Analyzed COVID-19 data with genders and age 20-60 to test independence by Nonparametric Method.
- Calculated test-statistics of Kruskal-Wallis and constructed the contingency table of expected counts by R.
- Optimized and communicated highly complex data problems into simple, feasible solutions.

ACADEMIC EXPERIENCE

Applied Linear Algebra — Jun. 2022 - Jul. 2022
- Implemented the singular value decomposition (SVDs) on the classification of hand-written digit recognition, text mining, and page rank for a web search engine by Python Panda

Linear Regression & Analysis Variance — Sep. 2021 - Mar. 2022
- Mastery of linear regression, variable selection techniques, stepwise regression, analysis of covariance, influence measures, and computing packages, as well as their application.
- Analyzed data derived from scientific investigations using fundamental study design concepts.
- Developed from theory to practice the ability to construct ANOVA models for numerous applications.

SKILLS

Language: Chinese, native language; English, advanced.
Programming & Software: Python, R Studio, C/C++, MATLAB, HTML, SQL, GitHub, Jupyter Notebook
Computer Skills: Database Management, Microsoft Office (Excel, PowerPoint), Data Visualization, LaTeX
Design & Analytical Skills: Surveys Designing, Analytics Reasoning, Problem Sensitivity, Data Collection
Certification: Python for Time Series Data Analysis