YUEQI XU

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EDUCATION

University of Washington Seattle, WA
Master of Science in Biosatistics *Expected Mar. 2024*
Cumulative GPA: 3.95/4.0

University of Washington Seattle, WA
Bachelor of Science in Statistics *Sep. 2017 – Mar. 2022*
Minor in Informatics & Mathematics
Honors: Dean's List, Graduated Magna Cum Laude

SKILLS

Statistical Analysis: Regression, Survival Analysis, Bayesian Analysis, Machine Learning, Non-parametric Analysis, Time Series, Inferential Statistics, Deep Learning
Programming Languages: R (proficient), SQL (advanced), Python (advanced), Java, JavaScript, HTML5, CSS
Software and Tools: Tableau, d3.js, LaTex, R Markdown, Excel, Word, PowerPoint, Git
Soft Skills: Communication, Collaboration, Time Management, Planning, Critical Thinking, Problem-Solving

PROJECTS & RESEARCH

Predicting Student Performance in Game-Based Learning (GitHub) *Apr. 2023 – present*
- Utilizing logistic regression, random forest, and gradient boosting algorithms to predict student performance in an educational game using game logs.
- Conducting a thorough evaluation and comparison of each method's performance

Clustering Methods (GitHub, PDF) *May. 2023 – Jun. 2023*
- Implemented **mean shift clustering** and **hierarchical clustering** algorithms on a given dataset using **R**, comparing their performance through visual assessment, stability analysis, and internal evaluation. Gained insights into the strengths and limitations of each approach.

A Predictive model for Perfume Prices (GitHub) *Jan. 2022 – Mar. 2022*
- Conducted **exploratory data analysis** (EDA) and developed **predictive models** in **R** to analyze key factors contributing to retail perfume prices. Employed **step-wise backward selection** to identify the best model and evaluated model performance using **cross-validation**.
- Created an analytical report and presentation slides using **LaTex** and **Google Slides**, clearly explaining the data set and strategies employed to build the model, and providing a detailed interpretation of the final result.

Method Review of the BNT162b2 Vaccine Phase III Trial (GitHub, PDF) *May. 2021 – Jul. 2021*
- Analyzed the **Bayesian work-flow**, specifically the prior belief and parameter transformations, proposed in the efficacy trial of BNT162b2, the Pfizer-BioNTech Covid-19 vaccine. Visualized analytical results with **ggplot2**.
- Developed alternative justifiable Bayesian work-flows, emphasizing our favored philosophy of prior selection, and utilized **grid approximation** to determine parameters that satisfy the proposed prior belief.

EXPERIENCES

University of Washington Seattle, WA
Biostatistics Tutor *Oct. 2022 – Dec. 2022*
- Tutored students in biostatistics concepts and methods, data analysis, and R programming through two to three 2-hour sessions per week.

Guangzhou Yuexiu Local Taxation Bureau Guangzhou, China
Data Analyst Intern *Jul. 2019 – Sep. 2019*
- Reviewed tax payment data for over 200 companies and more than 10,000 individuals in detail using **Excel**, and reported entities with suspicious tax activities to assist in identifying instances of tax evasion. Increased the efficiency of the inspection process by approximately **25%**.
- Analyzed tax payment data with **Excel** and developed quarterly analytical tax payment reports with **Word** for over 200 companies.