Alan Wu

+1 862-485-9127 | alan.lw25@gmail.com | linkedin.com/in/alanlwu | github.com/alan-w25 | alan-wu.me

Education

University of Pennsylvania
Master of Science in Engineering in Data Science *Expected May 2026*
Activities: Resident Assistant

Rutgers University- New Brunswick
Bachelor of Science in Computer Science, minor in Statistics (GPA: 4.0) *May 2024*
Honors: Summa Cum Laude, Paul Robeson Scholar, Phi Beta Kappa and Matthew Leydt Society

Technical Skills

Languages: Python, SQL, R, Java, JavaScript, HTML and CSS
Libraries/Frameworks: Numpy, Pandas, Pytorch, Matplotlib, Seaborn and Sci-kit Learn
Developer Tools: Git, MySQL, PostgreSQL, Docker, Azure CLI, Firebase, Tableau and Salesforce Marketing Cloud

Experience

Assistant Data Scientist
Wharton School of Business, AI Initiative *Jul 2024 – Present*
- Modeled book PnL outcomes and investigated factors contributing to trade outcomes for asset management firm
- Scraped and inserted over 12 million records of google review data into PostgreSQL database
- Developed **Tableau** dashboard to visualize data relationships between text and image reviews
- Conducted multi-modal sentiment analysis and applied visualization techniques to extract insights from 3.5 million restaurant reviews with python and OpenAI API

Undergraduate Research Assistant
Rutgers Cancer Institute of New Jersey *Aug 2023 – May 2024*
- Modeled patient survival times and outcomes with survival support vector machines (ssvm) and random survival forests on 108 lung cancer patients
- Built heat maps, cluster diagrams, and survival curves to measure statistical significance with **python**, **matplotlib** and **seaborn**. A/B tested features with log-rank tests and Kaplan-Meier curves
- Tuned L2 strength, learning rate and kernel of ssvm model with stratified k-fold cv, yielding 0.83 C-Index

Software Engineer Intern
ASICS Digital *Jul 2023 – Dec 2023*
- Automated previously manual process to verify metadata overlap with **python** scripts to inform key design decisions during migration to a new Customer Data Platform. Verified over 2 million records
- Designed an A/B testing framework for email delivery using **Postman API**, enabling the marketing team to analyze engagement patterns; insights gained were utilized to optimize delivery strategies for 50,000+ recipients
- Authored and optimized **SQL** queries, assisting in GDPR-user compliant deletion for over 1.7 million customers
- Directed three workshops to elevate team skill sets in **Postman API**, **SFMC integrations** and **Git VCS**

Projects

LangTrain | *React Native, Expo CLI, TailwindCSS and OpenAI API*
- Released an AI-powered Mandarin Chinese language teaching mobile application with 50+ AI-generated lesson plans based on user topic and difficulty preferences using **OpenAI API** and **Google TTS API**
- Managed image, audio, and lesson object data with CRUD operations through firebase using **Firebase API**

Chinese MNIST Digit Detection App | *Next.js, Fastapi, Pytorch, Docker and Azure*
- Deployed full stack web application to accomplish classification of 15 Chinese hand-written digits
- Built custom CNN architecture that achieved validation accuracy of 0.92
- Containerized app with **docker** compose and used **Azure** web services and container instances for deployment

Online Retail Analysis | *Python, Pandas, Numpy, Matplotlib and Sci-kit Learn*
- Conducted data pre-processing on UCI online retail dataset to ensure quality and consistency, implementing RFM (Recency, Frequency, Monetary) analysis to segment 4,000 customers based on purchase behavior
- Developed a **random forest** predictive model, fine-tuned with grid-search cv, achieving a 0.76 R-squared value

Clinical Heart Failure Bayesian Analysis | *R, RMarkdown, rstanarm and ggplot2*
- Executed Bayesian logistic regression techniques, implementing an MCMC simulation-based model to predict patient survival from a dataset of 299 heart failure cases
- Achieved 0.87 accuracy using Bayesian logistic regression model, incorporating prior knowledge

Interests

Hobbies: Cooking, Ultimate Frisbee, Reading, Golf, Learning New Languages, Running and Hackathons