Yitong Shan

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EDUCATION

University of Washington – Seattle, WA   Sep 2020 - Jun 2024 (Expected)

Bachelor of Science, double major in Computer Science and Statistics

- **GPA**: 3.9/4.0 | Computer Science courses GPA: 3.96 | *Honor: UW Annual Dean's List*
- Course Highlights: *Data Structure and Algorithms, Machine Learning, Database Systems, Probability and Mathematical Statistics.*

TECHNICAL SKILLS

Programming Languages: Java, Python, SQL, R, Stata, HTML, CSS, JavaScript
Technical Tools: Android Studio, Git, Tableau, BigML

WORK EXPERIENCE

Student Research Assistant | UW Center for Education Data & Research, Seattle, WA   Feb 2022 – Present

- Analyzed nationwide school district job shortage dynamics and teacher employment trends based on job postings throughout the pandemic in **Python**.
- Web-scraped XPATH and extracted text from the school district and job posting websites using *scrape_lib*. Collected and systemized ~70k school-related job posting information in 4 states. Did data-cleaning in Stata.

Data Mining Intern | China Construction Bank Corporation, Shenyang, China   Aug 2021 – Sep 2021

- Built machine learning models to predict Indian Car Loans Overdue at the Financial Technology Department.
- Analyzed data and did feature engineering to fit the models (size: ~233k) in **Python**.
- Optimized and improved the accuracy of **logistic regression**, **random forest**, **SVM**, and **XGBoost** models, resulting in the highest accuracy of 78% for the XGBoost model.

PROJECT

Music Player | Android Application (Group)   Jul 2022 – Aug 2022

- Developed a local music player app using **Android Studio**.
- Implemented functions including playing songs, creating playlists, and sorting songs from most listened to least in **Java**.
- Implemented **SQL** database to categorize and filter songs (size: ~2000) by singer/album name/song name.
- Designed app layout and visualized the beats of a song.

To-do List Website | Flask Web Application (Independent)   Jun 2022 – Jul 2022

- Built a full-stack website that can create to-do lists for different users in **Python** using **Flask** framework.
- Styled the Sign-up, Login, and Notes web pages using **Bootstrap**, and built HTML pages using **Jinja**. Designed User and Note database using **SQLAlchemy** toolkit.
- Attracted 200+ users.

SWE Hackathon | Web Application Project link   Apr 2022

- Built a web app 'DawGo' that encourages users to discover local businesses around UW through an interactive map, and get reward collection through raffle games.
- Integrated Google APIs to locate users with Google Maps, designed Frontend view website with **HTML, CSS, JavaScript**
- **Winner** of UW SWE Hackathon '22 - Welcome Back: Local Businesses Track.

Music Genre Classification Project | UW SPA Direct-Reading Program   Oct 2021 – Dec 2021

- Extracted certain features from 1,000 songs using audio signal processing techniques in **Python**.
- Classified song genres using the **K-nearest neighbor** algorithm, based on the symmetric **KL divergence** between two songs under the Gaussian assumption of the features.
- Used *sklearn* **K-fold Cross Validation** method for model evaluation, compared and plotted the accuracy of each fold by the *seaborn* package, and improved the prediction accuracy to 72%.

ACTIVITIES & LEADERSHIP EXPERIENCE

Vice President, UW Statistics and Probability Association   May 2022 – Present

- Organized weekly meetings. Held SQL, LaTeX, and internship prep workshops.
- Connected 50+ students with mentors, faculty, and research opportunities in the Statistics Department.