Cao Lifan

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Education

Waseda University — Tokyo, Japan
Master of Science in Computer Science and Engineering — *Sep. 2021 – Expected Sep. 2023*

Sichuan University — Chengdu, China
Bachelor of Engineering in Software Engineering — *Sep. 2016 – July 2020*

Experience

Front-End Engineer Intern — July 2020 – Sep. 2020
Wayeal Technologies — *Hefei, China*

- Maintained the company website, reviewed code, and made improvements to the code base.
- Collaborated with the website development team to redesign and create the website layout under W3.CSS framework to make the website responsive.
- Increased 21% access from mobile devices and decreased 10% bounce rate since the release.

Undergraduate Thesis Research — Oct. 2019 – June 2020
Sichuan University — *Chengdu, China*

- Worked with Prof. Yu to develop software for chloroplast genome assembly studies and implemented multiple functions including data management, sequence alignment, and sequence annotation.
- Produced a user friendly GUI using Qt for non-expert biological researchers who are unfamiliar with the command line interface to vastly improve user experience.
- Packaged the tool using Docker to enable the application to easily run on different environments.

Research Assistant — Nov. 2018 – Feb. 2019
Sichuan University — *Chengdu, China*

- Collected 700,000 data of plants from 150 nature reserves in Sichuan, denoised, unificated, and integrated data to a single format by performing transformations, deduplications, and cleaning of all the records.
- Created a mySQL database to contain the classified data.
- Collaborated to build a website that facilitates searching, visualizing key data, and presenting concise information regarding plants in nature reserves.

Projects

Street Rendering | *JavaScript, WebGL, Three.js, Git* — Nov. 2021 – Jan. 2022

- Implemented a street scene rendering with weather and lighting system using Three.js.
- Simulated the effect of snowfall and rainfall in the rendering environment.
- Presented an interactive web page with Github Page for users to manipulate the rendering parameters and generate different rendering results.

Titanic Survival Prediction | *Python, Pandas, Numpy, Matplotlib, Pytorch* — June 2018 – July 2018

- Preprocessed Titanic passenger dataset, replaced the missing value with the mean and mode, and used principal component analysis to extract 7 important features from all 30 features.
- Built a logistic regression model and split the dataset into training and test sets.
- Improved the final model utilizing k-fold cross-validation to mitigate overfitting and achieved a prediction accuracy of 84.9% in the test set.

Technical Skills

Languages: Python, JavaScript, HTML/CSS, Java, SQL
Libraries/Frameworks: React, Next.js, RESTful API, WebGL, Pytorch
Developer Tools: Git, MySQL, Qt, Docker, Google Cloud Platform