YUKAI YAN

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EDUCATION

UNDERGRADUATE: UNIVERSITY OF WASHINGTON **EXPECTED GRADUATION: DECEMBER 2021**

Major: Computer Science & Applied Computational Mathematical Science
UW Honors Program Awards: Dean's list Cumulative GPA: 3.79/4.00
Technology and Business Association Leader (Registered Student Organization at UW)
Courses taken: Software design and implementation, Software Engineering, Data structures and parallelism, Data management, Data Visualization, Compiler construction, Computer Security, Distributed Systems, Artificial Intelligence, Machine Learning.

SKILL SET

- Languages: Java, Python, C, C++, MATLAB, JavaScript, SQL.
- Applications: Git, Python(Numpy, Sklearn, Django, Selenium, Beautiful Soup), React, Amazon S3, Sagemaker, Overleaf.
- Developer Skills: Software Development, Object-Oriented Design, System Programming, Software Testing and Debugging, Web Crawling and Processing, Data Analysis and Visualization, Written and Verbal Communication, Team Collaboration.

EXPERIENCE

INTERNSHIP: SOFTWARE ENGINEER INTERN AT 98POINT6 **JUNE 2021 – SEPTEMBER 2021**

- Analyzed the existing neural network with past-year data, designed various models that could improve the performance, used RandomizedSearchCV to tune the hyperparameters and trained multiple models to compare their metrics.
- Based on the research, implemented a better model in the repo, updated API and added additional service-level tests.
- Composed a design document to track the model design, metrics comparison, overall analysis and potential impact.
- Reviewed code and presented to the team, conducted sniff tests with customers, deployed the branch into production.
- *Technologies: Python, PyTorch, Sklearn, NumPy, SQL, Sagemaker, Jenkins, Jupyter Notebook, GitHub, Jira, VSCode.*

LEADERSHIP: TEACHING ASSISTANT AT PAUL G. ALLEN SCHOOL **JANUARY 2021 – JUNE 2021**

- Courses taught: Probability & Statistics for Computer Scientists (winter), Intro to Compiler Construction (spring).
- Covered Counting, Probability, Distribution, Bounds, Maximum likelihood Estimation with students.
- Helped students build a compiler that compiles and executes MiniJava programs through Scanner, Parser, Abstract Syntax Tree, Semantic Analysis, Assembly Code Generation and Optimization.
- Led weekly review/practice sessions, held office hours to answer questions, Prepared and Graded assignments/exams.
- *Technologies: Java, Apache Ant, C, x86 Assembly Language, IntelliJ, GitLab, Overleaf, Google Doc.*

PROJECT: USER ANALYTICS - CHROME EXTENSION **MARCH 2021 – JUNE 2021**

- Designed and developed a chrome add-on that allows users to view their Chrome usage trends through stylized and interactive visualizations. Implemented the backend that tracks user's usage and stores data on Chrome sync.
- Added API and incorporated with the frontend team to process and display daily/weekly usage data (Github repo).
- *Technologies: Javascript, Html, VSCode, Google Doc, Slack, GitHub.*

PROJECT: CAMPUS MAP - SOFTWARE DESIGN AND IMPLEMENTATION **JUNE 2019 – AUGUST 2019**

- Built a Graphic User Interface that displays the shortest path between buildings selected on the map of campus.
- Designed the underlying Abstract data types to save and represent the data about the map properly.
- Implemented model-view-controller design pattern, used a Spark Java server to take requests and React to build the frontend. Added the specification and Implementation tests to analyze and improve the code (demo video).
- *Technologies: Java, Spark, React, JavaScript, Html, IntelliJ, GitLab.*

RESEARCH

RESEARCH ASSISTANT: F.A.T.E. **SEPTEMBER 2019 – DECEMBER 2019**

- Research Topic: Fair, Accuracy, Transparency, and Equality in search engines.
- Built an online questionnaire and implemented the backend using Django to process frontend requests and send data.
- Designed the UI and the communication to the database at the frontend (sample page).
- *Technologies: Python, Django, Html, JavaScript, VSCode, GitHub.*