Albert Yuan

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EDUCATION

Duke University, Pratt School of Engineering   **Durham, NC USA**
Master of Engineering (MEng), Electrical and Computer Engineering   August 2023 - Expected May 2024
Machine Learning/Big Data Specialization
Relevant Coursework: Random Signals and Noise, Deep Neural Nets, Probabilistic Machine Learning, Signal
Detection and Estimation Theory

Duke University, Trinity College   **Durham, NC USA**
Bachelor of Science (BS), Computer Science   August 2019 - May 2023
GPA: 3.7 | Dean's List (2019, 2020)
Relevant Coursework: Data Structures and Algorithms, Software Design and Implementation, Advanced
Algorithms, Operating Systems, Database Systems

SKILLS

Coding Languages: Python, Java, C, R, Bash, HTML, CSS, Swift, Javascript
Database Systems: SQLite, Presto SQL, PostgreSQL, GraphQL, Firebase Realtime DB
AWS: Athena, Glue, S3, Amplify
Tools: Git, LaTeX, Vim, Markdown, Firebase, React

EXPERIENCE

University of North Carolina Chapel Hill, Chapel Hill NC
Computation Science Programmer   November 2023 – Present
- Developed pipelines in R and Bash to conduct data analysis on genetics from UK Biobank
- Generated a sparse kinship matrix to determine which genetic samples are related to enhance variant analysis
- Leveraged R code and Bash scripts to identify genetic variants that cause kidney diseases

Duke University, Durham NC
Computer Science Teaching Assistant, Introduction to Computer Systems   2022 – December 2023
- Supported students in connecting class concepts like caching, virtual memory, and bit manipulation to practical applications like coding homeworks
- Led recitation and held office hours for a class of 100 students, teaching students to debug C code

N1 Health, Boston MA
Software Engineer Intern   March 2021 – August 2022
- Designed a machine learning model to contribute to the analysis of how likely a person was to be hospitalized, by locating nearby public transit in a given radius with Spatialite SQL
- Built a semantic data lake in Python to record the data sources of SQL queries.
- Engineered data models with PrestoSQL for AWS and analytics workflows to confirm scalablilty
- Packaged data models and data lake into a central deployable artifact using Poetry in Python

PROJECTS

Ranked Mini Ultimate Frisbee App   July 2023 – Present
- Created a web app using React.js and Firebase to store, search, and rank players in Ultimate Frisbee
- Designed charts using Chart.js to plot player rankings over time, powered by real time data
- Wrote end-to-end tests using Jest to ensure core features and flows didn't break in production
- Architected an automatic deployment system using GitHub Actions to test and deploy on code push
- Optimized Firebase NoSQL database for fast data reads by using indexes on common code paths