

# Albert Yuan

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## EDUCATION

**Duke University** Durham, NC

**Expected May 2024**

Masters in Electrical Engineering with a concentration in Machine Learning

**Duke University** Durham, NC

**May 2023**

Bachelor of Science in Computer Science, GPA: 3.8 | Dean's List (2019, 2020)

## Relevant Coursework

Data Structures and Algorithms, Software Design and Implementation, Introduction to Computer Systems, Advanced Algorithms, Operating Systems, Database Systems, Differential Equations, Vector Spaces, Random Signals and Noise, Deep Neural Nets, Probabilistic Machine Learning, Signal Detection and Estimation Theory

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## EXPERIENCE

**Computation Science Programmer** - UNC Chapel Hill

**November 2023 – Present**

- Developed pipelines in R and Bash for data analysis on genetics from UK Biobank
- Generated a sparse kinship matrix to determine which genetic samples are related
- Leveraged R code and Bash scripts to discover potential causes of genetic diseases

**Computer Science Teaching Assistant** - Duke University

**January 2022 – December 2023**

- Led recitation and held office hours for Introduction to Computer Systems
- Taught students concepts related to system programming and computer organization
- Created and graded weekly labs assignments, problem sets, and exams

**Software Engineer Intern** - N1 Health

**March 2021 – August 2022**

- Designed a machine learning model to locate nearby train stations in a given radius with Spatialite SQL
  - Built a semantic data lake in Python to analyze SQL queries to provide query insights
  - Engineered data models with PrestoSQL to be used by AWS and analytics workflows
  - Packaged the data models and data lake into a deployable artifact using Poetry in Python
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## 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
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## SKILLS

**Coding Languages:** Python, Java, C, R, Bash, HTML, CSS, Swift, Javascript

**Database Systems:** SQLite, Presto SQL, PostgreSQL

**AWS:** Athena, Glue, S3

**Tools:** Git, LaTeX, Vim, Markdown, Firebase, React

**Languages:** Intermediate Chinese and Spanish