Alan Hagedorn

haged077@umn.edu | avhagedorn.github.io | github.com/avhagedorn | (612)-889-4543

EDUCATION

University of Minnesota   Twin-Cities, MN
Bachelor of Science in Computer Science, 4.0 GPA   *Graduation expected in 2024*

Relevant Coursework: Algorithms and Data Structures, Intro to Machine Architecture, Discrete
Mathematics, Advanced Programming Principles

EXPERIENCE

Dropbox   May – Aug 2022
Software Engineer Intern   *San Francisco, CA*
- Developing a full-stack search solution to discover dynamic web-pages hosted by Dropbox
- Using **Coveo**, **Python**, and **React** to create internal tooling

Modern Treasury   Jan – May 2022
Software Engineer Intern   *San Francisco, CA*
- Developed full-stack web solutions using **Ruby, React, GraphQL**, and **TypeScript** for financial transactions
- Reduced technical debt for reporting and permissions by implementing customer-requested features and reactors
- Collaborated with other engineers to help automate billing jobs, reducing the work of the finance team
- Implemented new approval rule features for prospective customers, collaborating with customer success
- Leveraged **GraphQL**, **Apollo**, and **React** to modernize multimedia file uploads
- Wrote unit and feature tests to ensure a consistent, bug-free user experience

PROJECTS

SkateShare | *Kotlin, Dagger Hilt, Firebase, SQLite, Maps APK, LeakCanary*   Jul – Sept 2021
- Developed an MVVM android app for users to record and share electric skateboarding routes
- Used Firebase for an infinitely-scrolling feed of media posts, customizable user profiles, and route sharing
- Utilized geospatial queries with Firestore for saving and sharing routes to a global map
- Used Room, SQLite, and MPChart to save and visualize data from private routes
- Used De Boor's B-Spline algorithm to smooth and interpolate raw route data
- Was exposed to android development, MVVM architecture, dependency injection, Firebase, and geo queries

Grade Analysis and Visualization Webapp | *Python, Django, PostgreSQL*   Apr – Jun 2021
- Developed a web application for professors to upload, analyze, and visualize course data
- Implemented grading curve suggestions and future assignment predictions based on past scores
- Acquired database skills by writing and refactoring models, improving performance
- Was exposed to Django, Pandas, SQL, CRUD applications, and Bootstrap4

Live Energy Monitor | *Python, Flask, PostgreSQL*   Aug - Sept 2021
- Developed a website that displays real time and historical energy usage.
- Built a basic API endpoint with Flask to implement HTTP requests with ESP32 microcontrollers to collect data.

Conway's Game of Life (Android) | *Kotlin*   Aug 2021
- Developed an app that allows players to explore Conway's Game of Life.
- Features drawing of cells, allowing users to visualize the algorithm in real time.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, HTML/CSS, Kotlin, Ruby, OCaml
Web Frameworks: React, Ruby on Rails, Django
Database Experience: PostgreSQL, SQLite, Firestore (No-SQL)