

Matayay Karuna

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EDUCATION

University of Colorado Boulder

Boulder, CO

Bachelor of Science in Computer Science | GPA: 3.58

Aug. 2022 – May 2026

Relevant Coursework: Data Structures, Intermediate Web Development, Computer Systems, Database Systems, Software Development Methods and Tools, Intro to Data Science, Intensive Programming Workshop, Algorithms, Principles of Programming Languages, Intro to Artificial Intelligence, Human Computer Interaction

EXPERIENCE

Student Software Engineer

June 2023 – Present

CU LAIR Lab

Boulder, CO

- Fullstack Engineer responsible for developing a website to interface, monitor, and retrieve data from DAQ sites measuring VLF radio waves
- Made use of Next.js and Tailwind.css to create front-end and build responsive UI
- Leveraged AWS services including API Gateway, Lambda, and Dynamodb to create a websockets API which allows bidirectional communication between website and DAQ sites in under 1 second
- Setup and maintained a PostgreSQL database consisting of multiple tables that can be joined for the backend
- Developed REST API using Express.js to link up website, database, and a Network Attached Storage server (NAS)

PROJECTS

Checkers | C++, Qt

April 2024 - May 2024

- Two player checkers game that alternates between each sides turn after every move
- Supports chain attacks. Game ends when one player wins or when no moves are possible
- Developed game logic in C++, implemented GUI using Qt Creator

Personal Website | SvelteKit, Tailwind, Typescript

June 2023 – July 2023

- Created a personal website to serve as a portfolio and to illustrate my experience
- Implemented transition animations on page load and scroll

Star Wars Hub | Firebase, React, Tailwind, Typescript

April 2023

- Developed a Star Wars themed forum site that allows for the creation, editing, and deletion of posts
- Each post can be liked and commented on and contains a title, image, and subtitle
- Wrote CRUD functions that connect to a Firestore Database to manage post storage

Where's Waldo? | CSS, Firebase, React, TypeScript

March 2023

- Created a Where's Waldo photo tagging app
- Built an algorithm to calculate (X, Y) coordinates of Waldo, The Wizard, and Odlaw
- Implemented distance formula to calculate the proximity of a user click to a character
- Fetches from a Realtime Database to get the data on where the characters are

Calculator | CSS, HTML, JavaScript

December 2022

- Created a standard calculator using vanilla JavaScript
- Includes the same operations as the default iOS calculator

Dungeon Escape | C++

November 2022 – December 2022

- Built a text based dungeon escape game that runs in the terminal
- Allows the user to create a party of characters to traverse the dungeon with
- Functionality includes a terminal generated map that can be moved through
- User must clear five rooms of enemies and make it to an exit to win

TECHNICAL SKILLS

Languages: Assembly x86-64, C/C++, CSS, HTML, Javascript, Python, SQL, TypeScript

Frameworks: Bootstrap, Express.js, Next.js, React, Sveltekit, Tailwind.css

Databases: Dynamodb, Firebase, MySQL, PostgreSQL, Supabase

Technologies: AWS Lambda, Docker, Git, HTTP, Node.js, VSCode, WebSockets

Other: Agile Methodology, Communication Skills, Linux