

# Matayay Karuna

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## EDUCATION

### University of Colorado Boulder

Bachelor of Science in Computer Science

Boulder, CO

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

## 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 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
- Developed REST API using Express.js to link up website, database, and a Network Attached Storage server (NAS)

### Security Guard

September 2022 – May 2023

Norlin Library

Boulder, CO

- Maintained safety in the University Library by conducting routine rounds and security checks
- Offered assistance to patrons regarding lost and found as well as general questions

## PROJECTS

### 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 Odaw
- 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:** C/C++, CSS, HTML, Javascript, Python, SQL, TypeScript, x86-64 CISC

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

**Databases:** Dynamodb, Firebase, MySQL, PostgreSQL, Supabase

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

**Other:** Agile Methodology