Kyle Neff

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EDUCATION

B.S. in Computer Science Boulder, CO

Minor in Business May 2025

University of Colorado Boulder

GPA 3.472

TECHNICAL SKILLS

- Python, C++, JavaScript, HTML, MySQL, Java, Scala, Git, Agile, Android Studio, Linux, Algorithms, Data structures

Projects

NASA JPL Rover Pathfinder
- Collaborated in a NASA JPL sponsored team consisting of 4 other students that created an A* pathfinding algorithm in Python to find the optimal path from point A to B to automate rover traversal and required human interaction.
- Developed a pathfinding algorithm capable of handling decimated 10GB DEM models and navigating unknown terrain to improve functionality for expansive environments and diverse usability options.
- Visualized a 3D model of the rover path using HTML, JavaScript, and WebGL to simplify user interface and allow an easier and more general use of the program.
- Presented the project to NASA JPL sponsors and to over 300 industry professionals and students.

Music Recommender
- Implemented a Full Stack Spotify-like webpage that holds user playlists and generates top 10 song recommendation playlist based on previously listened to songs and user preferences.
- Programmed music recommendation playlist in Python that uses a collaborative filtering approach to create a co-occurrence matrix of the user's songs and all songs in the database.
- Connected the frontend created in HTML and JavaScript to the backend using Flask to enable dynamic data retrieval and seamless user interaction with the database.
- Organized a 260 KB song database using MySQL Workbench to optimize data retrieval and support querying for user interactions and song data.

Zillow Scraper
- Created a web scraper using Python and BeautifulSoup to automate extraction of over 40 properties per page from Zillow to allow for efficient data collection and analysis of property listings.
- Utilized Selenium to automatically scroll zillow and navigate the web page to capture dynamically loaded data into database
- Organized data by writing into a csv and storing results into a MySQL database that contains property details such as address, price, and floor size to allow for easy comparison.

GeoLock
- Programmed a Full stack web app using Next.js framework that enables users to explore nearby locations, view others' comments, share their own experiences, and interact with posts to build a community driven app for local location insights.
- Designed web app to allow logged-in users to interact with posts by liking, disliking, commenting, and favoriting locations to add more community based feedback.
- Connected PostgreSQL database to web application with a REST API and deployed using Docker and Heroku for easy configuration and deployment

Work Experience

Dinner Cruise Server 05/2023-08/2023

Star of Honolulu Honolulu, HI

- Delivered over 100 separate meals and over 50 drinks in a 3 hour dinner service, ensuring smooth delivery of meals through efficient table bussing and organization to guarantee customer satisfaction.
- Offered drink recommendations and maintained an in-depth knowledge of all menu items, consistently checking orders for quality and consistency.
- Created a fun, family-friendly atmosphere while upholding strict sanitation and food safety standards to ensure an enjoyable and professional cruise.