OJAS BARAL

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EDUCATION

UNIVERSITY OF COLORADO BOULDER

Boulder, CO

Bachelor of Science in Computer Science, Minor in Business

Aug 2022 - May 2026

Cumulative GPA: 3.96/4.0; Dean's List 2022-2023

Relevant Coursework: Starting Computing, Data Structures, Computer System, Software Development, Database Systems

EXPERIENCE

LAVNER EDUCATION

Denver, CO

Information Technology Intern

Jun 2023 – Aug 2023

- Installed and configured software applications on clients devices to enhance learning experiences for students.
- Delivered technical support and troubleshooting assistance to students, promptly addressing on-site software-related issues and minimizing downtime with no outrage longer than 30 minutes.
- Mentored 10 students on coding languages such as Python and Java, imparting fundamental programming concepts and fostering proficiency in software development resulting in competence with skills like object-orienting programming.
- Facilitated the learning of machine learning and web development to students, equipping students with the ability to design their own machine learning models or develop an efficient functioning web application.
- Instructed and guided 10 students in the programming of robots, fostering their understanding of robotics principles and empowering them to develop functional and interactive robot applications.

PROJECTS

ONE TAKE A DAY (SOCIAL MEDIA WEBSITE)

Jun 2023 - Jul 2023

JavaScript, ReactJS, Node.js, Express.js, PostgreSQL, Tailwind CSS, Render

Website | Github

- Web application allowing registered users to post sports opinions with like/comment, follow, and hashtag functionality.
- Developed a REST API using appropriate HTTP methods to handle data interactions between the frontend and backend.
- Utilized JWT libraries and frameworks to integrate token-based authentication into API endpoints and web-routes.
- Designed and implemented relational database models using PostgreSQL, establishing relationships such as one-to-one, one-to-many, and many-to-many to efficiently organize and query data.
- Leveraged SQL's powerful features such as JOINs, subqueries and aggregate functions to write effective queries which efficiently retrieve and manipulate data from multiple tables.
- Developed an aesthetically pleasing and efficient user interface by leveraging ReactJS and Tailwind CSS.
- Leveraged Render's platform to deploy the frontend, backend, and database infrastructure, streamlining the deployment process and minimizing setup complexities.

MINI GIT CLONE

Dec 2022

C++, *GoogleTest*

Github

- Developed and tested a mini version of Git, leveraging various data structures to enable efficient version control and code management.
- Implemented a linked list data structure to efficiently store and manage staged files in a project.
- Created a commit feature that automatically copies and stores newly created or modified staged files in the Git directory, preserving their version number for effective version control.
- Leveraged hash tables to create an efficient search method for commit messages using a single keyword, enhancing the ability to locate specific commits quickly.
- Developed a checkout feature that searches a doubly linked list storing the commits and replaces the current directory with the specific commit selected by the user.
- Employed Google Test framework to create comprehensive test cases for the hash table implementation.

TECHNICAL SKILLS

Programming Languages: JavaScript, Python, C++, SQL (PostgreSQL), NoSQL (MongoDB), HTML, CSS

Libraries/Frameworks: ReactJS, Express.js, Node.js, Tailwind CSS

Developer Tools: Git, Visual Studio Code