Portfolio

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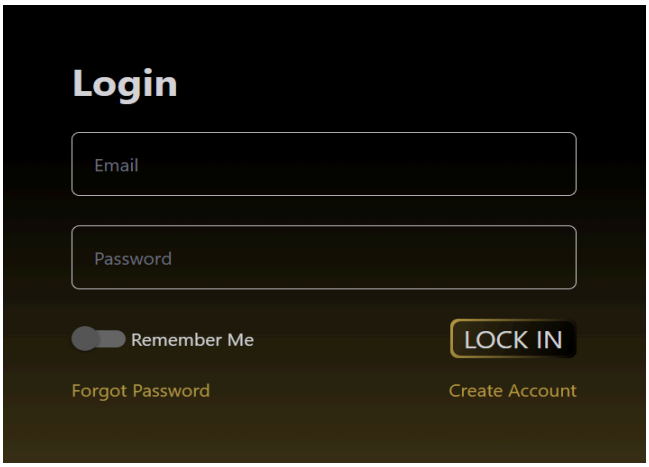
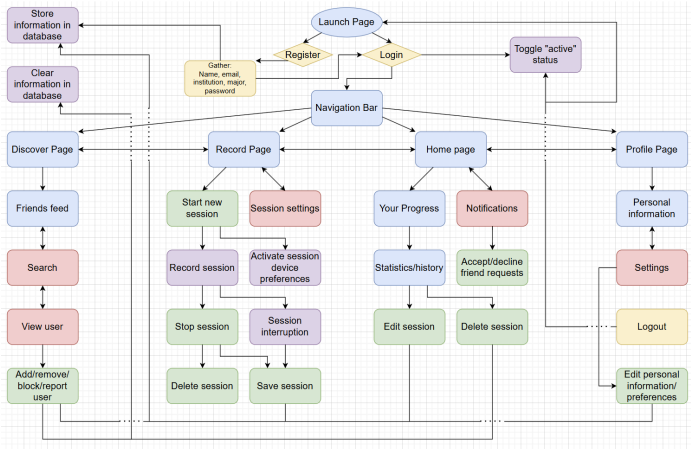
Studius - In Progress



Login Page



Flow Chart

- Designing and developing a full stack mobile application in collaboration with a psychology student at the University of Alberta which intends to provide a social media platform for students to record, track, share and encourage study habits
- Utilizing a tech stack consisting of React Native, Typescript, Tailwind CSS and MySQL (with Amazon Web Services) to ensure reliability in existing documentation and libraries, facilitating feature development and UI design
- Forming a RESTful client-server interaction structure and integrating with the native Android and IOS APIs to create a user experience that is centered around device integration within and outside the application
- Researching positive study habits and reinforcement methods to better understand the user's needs and provide relevant statistics to encourage self reflection and improvement
- **Project code available here.**

Library Noise Monitor

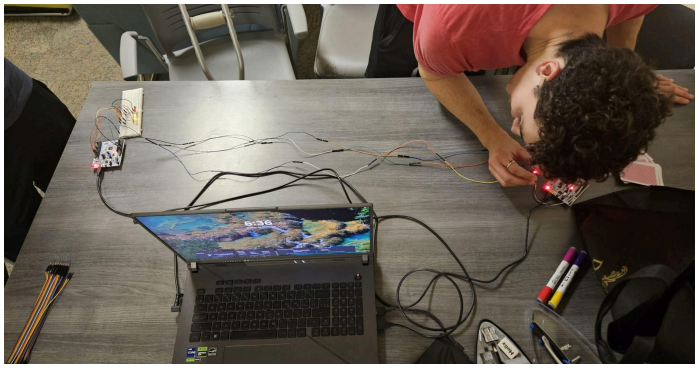


Photo of the initial noise signal transmission test

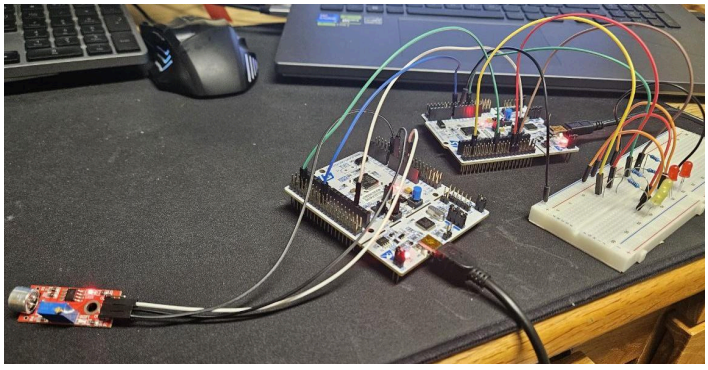


Photo of the entire system

- Designed a compact solution to silently and efficiently combat undesired high noise levels in libraries
- Conducted research on the common issue of excessive library noise to find current solutions which could be improved on
- Utilized 2 STM-32 microcontrollers to analyze information received by the microphone and output high noise level warning lights accordingly
- Wrote C code to transmit information between microcontrollers and handle input/output logic, using documented tests to ensure an input to output delay of under 1000ms and processing audio level processing within 5dB of precision
- Ensured the device met the requirements of transmitting signals over a length of 1m and utilizing less than 30W of power
- **Design document and code is available here.**

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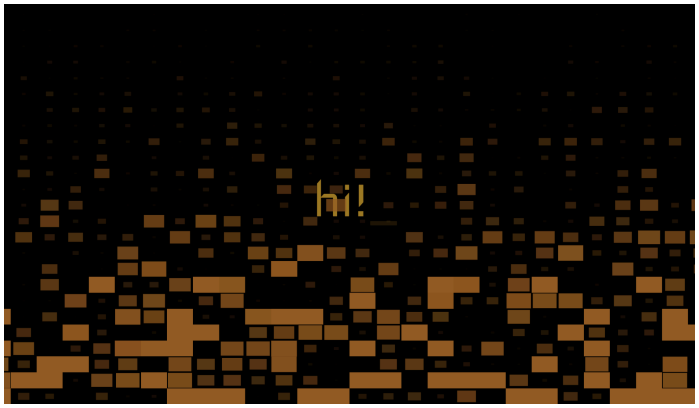
The Heart That Fed

Tutorial Scene

Main Gameplay

- Programming lead in a team of 5 during a 9 day game jam, ensuring communication between team members and proper, punctual development of the game's code base
- Utilized the C# programming option in the .NET build version of Godot to improve the performance, simplicity and readability of the code
- Set, enforced and adhered to strict timelines within the 9 day period of development for coordination purposes
- Used 2D camera nodes to program custom animations in an effort to reduce the workload on the team artist
- **Game page/download available here and code available here**

Personal Website



Still Shot of the Opening Animation

Still Shot of the Projects Page

- Utilized a tech stack consisting of React, TypeScript, CSS and JavaScript to create a fast, responsive web page with an attractive but simple and user-friendly UI which displays me and my projects
- Incorporated thoroughly researched and vetted libraries to facilitate development
- Interfaced with external APIs such as the Web3Force Email Service API to power contact form submission routing
- Challenged myself to learn JavaScript, TypeScript and the React framework and complete this project in 1 week
- **Website accessible here and code available here**