Capstone Project: algoRhythms

Statement: A game that gets you into the rhythm of solving algorithms in pairs

Tech Stacks:

1. Node

2. Express

3. React

4. Redux

5. Firebase

6. OpenTok

7. Web Worker + Ace Editor

8. Material UI

9. Three.js

MVP – Tier 1

- Users should be able to make an account

- Practice problems through pair programming – Web Worker + Ace Editor + Firebase

o Will look into Docker if time permit\*\*\*

- Shared screen/ same editor during the process

- Earn points for completion of problems.

- Implement basic web security – backend/firebase

- Securing route – front end

- User Profile

- Integrate OpenTok – voice communication

Tier 2 Part A

- UI/UX

- Pair programming with REACTO – Video Session – OpenTok

- Continuous Integration Deployment (CI/CD)

- No Guest - ( Some kind of homepage to redirect them and ask to sign up )

Tier 2 Part B

- Timer to switch up roles. One person’s mic is muted, and other person explains. One navigator/One driver.

- Switch up every 5 or 10 minutes features

- Implement web security

- Ace Editor – add more problems/test cases/freeze editor

- Level up based on earn points/completed problems.

- Repeat the REACTO Process prompts

Tier 3

- Emojis for the muted person to interact with navigator

- Screen to draw diagrams for examples ?

- Ranking up will have animations (3D / Three.js)

- Unlocking coloring themes/bonus with ranking up

- Home/Landing Page will have nice 3D or Three.js animation

- Share their process/ and contribute problems – Share their profile if possible

Tier 4

- Coding challenges – weekly contest with timer to solve an algorithm or debugging.

- Compete with each other with some kind of ranking/face off.

- Pair programming will increase difficulty level.

- Contribute problems (edited)