ROHAN **MUDUMBA**

Union City, CA | C: (510) 209-4737 | rohanmudumba@gmail.com |22 Years Old

EDUCATION

2023 App Academy Bootcamp – San Francisco, CA
- 12 weeks of pair programming for 6 hours a day, 3 hours of lectures
- 4 weeks of solo projects, and one group project
- Focus on full stack web development

2021 Cambridge University: Natural Sciences – Astrophysics(Physics and Math)
- Year 1: Physics, Materials Science, Earth Science, Maths
- Year 2: Physics practical and theoretical along with Maths
- Specialized final year in department of theoretical physics and applied math

CODING PROJECTS

- (JS) 3D Physics and Render engine built from 2D canvas. Small demo deployed on github.
  - Rendering and logic done purely through vanilla JS
  - Allows save of state and loading of state through local storage and parsing
  - Engine can be exported and used to create fully functional environments
- (Ruby/JS) Live shogi site with leaderboard and rankings.
  - Live game, chat, matchmaking through websockets and Action Cable
  - Game board made with vanilla JS and no third party libraries
  - Tracks elos from all users and can display in graphs on profile page, leaderboard, search
- (JS) Social media for creating and sharing presentation slides.
  - Multiple slide presentation creation, editing, and saving
  - Slide/resize/recolor element logic is done purely through vanilla JS and DOM manipulation
  - Likes and Comments features similar to mainstream social media sites

DATA VISUALIZATION PROJECTS

- (Python) Approximated energy loss of a binary system with respect to time and distance.
- (Python) Visualized and displayed orbits of massless and massive particles around black holes.

LAB PROJECTS

- Encoded/transmitted/received/decoded messages through use of EM waves and filters.
- Built circuits to perform arithmetic and calculus operations.

ENGINEERING PROJECTS

- Designed and prototyped a custom keyboard from scratch (PCB, Case, Weight)
  - Negotiation with vendors, open source code for pcb microcontroller logic

TECHNICAL SKILLS

- Coding languages: Ruby, Python, JavaScript, Latex
- Coding libraries/frameworks: React, Redux, Rails, Node, Express, MongoDB
- Data analysis libraries: Pandas, Numpy, Matplotlib, Matlab, SQL
- Engineering Softwares: KiCad, Fusion360

LANGUAGES

- English - Native
- Japanese - Fluent

LINKS

- (Github) https://github.com/RohanM2000
- (Live Shogi) https://shogi-5fna.onrender.com
- (3D Physics Engine) https://rohanm2000.github.io/3d-physics-engine/
- (Presentation Social Media) https://slidesquad.onrender.com
- (Probability Investigation)
  https://figshare.com/articles/preprint/Probabilities_Associated_with_Kotoba_Bot_Quizzes/22132259