

ROHAN MUDUMBA

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ABOUT

I am a recent college graduate looking for a challenging career where I can use the problem solving skills that I developed throughout my degree.

EDUCATION

2021 Cambridge University: Bachelor's in Natural Sciences – Astrophysics(Physics and Math)

2023 App Academy Bootcamp: Software Engineering, Computer Science, Full Stack Development

CODING PROJECTS

- **3D Physics and Render engine built from 2D canvas** (JavaScript)
 - Moveable/Turnable camera, painter's algorithm used for display priority
 - Developed storage schema and parser to handle complex data model with multiple levels
 - Github Demo involves 8x8 grid with options to drop different objects and shake the grid
 - Engine can be exported and used to create fully functional environments
 - [Github](#) | [Live Link](#)
- **Live Shogi(Japanese Chess) site** (Javascript/React/Redux/Ruby/Rails/PostgreSQL/AWS S3)
 - Live game, chat, matchmaking through websockets and Action Cable
 - User Auth implemented through cookies, error handling to ensure only valid user can move
 - Clock sync from backend to frontend to ensure accurate game timer, even on refresh
 - Profile pictures stored on AWS S3, without unnecessary permissions granted
 - Tracks Elos from all users and can display in graphs on profile page, leaderboard, search
 - Hosted on render.com along with a PostgreSQL database. Redis database for websockets
 - [Github](#) | [Live Link](#)
- **Social media for presentations** (Javascript/Node.js/Express.js/MongoDB/React/Redux)
 - Multiple slide presentation creation, editing, and saving
 - Group project, acted as team lead, reviewed pull requests, contributed 30k/50k lines of code
 - Developed storage schema for presentations and their components, along with parser
 - Developed logic for component movement and resizing with emphasis on user experience
 - Database hosted on atlas, deployment on render.com
 - [Github](#) | [Live Link](#)

ENGINEERING PROJECTS

- Designed and prototyped a computer peripheral from scratch (Circuit Board/Housing)
 - End to End design with vendor negotiation

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
- Others: Github, Postman, AWS S3

LANGUAGES

- English - Native
- Japanese - Fluent

LINKS

- [Github](#)
- [Probability Investigation](#)
- [Portfolio Website](#)