

## HTML PROJECTS

ALCHEMY GRIMOIRE | [VISIT WEBSITE](#)

Neo-Alchemy: An Interactive Web Grimoire | [Github](#)

- Engineered a custom particle-based mystic background using Particles.js to replace a standard starry night, enhancing the thematic atmosphere.
- Implemented a dynamic ritual command console that interprets user input to trigger complex animations and full-screen visual effects (e.g., pentagram tracing, gate unlocking).
- Utilized vanilla JavaScript for DOM manipulation, event handling, and animation logic, creating a performant and framework-free application. Crafting a fully responsive UI with advanced CSS3 features including Flexbox, Grid, custom animations, keyframes, and gradients to achieve a cohesive dark theme aesthetic.
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ALZEBRA-VISUALIZER | [VISIT](#)

A 3d Algebra concepts visualization tool | [Github](#)

- Built a responsive visualization engine from scratch using HTML5 Canvas that renders mathematical operations in real-time
- Implemented 10+ core linear algebra concepts including vector operations, matrix transformations, dot products, and eigenvalue decomposition with intuitive interaction models allowing users to manipulate vectors directly and observe resulting transformations
- Incorporated interactive controls, real-time parameter adjustments, and educational information panels.

METALCODE | [VISIT](#)

Leetcode for low level languages | [Github](#)

- Developed an interactive web application that enables users to practice Data Structures and Algorithms using low-level programming languages including C, x86-64 Assembly, ARM64 Assembly, MIPS, RISC-V, Rust, Go, and C++.
- Designed a problem system with 5+ algorithm challenges of varying difficulty levels
- Created language-specific architecture information panels and code validation features to guide users through low-level programming concepts
- Built a custom code execution simulator to test solutions against multiple test cases with detailed feedback

## REACT PROJECTS

ELEMENTFORGE | A MYSTICAL ALCHEMY LAB.

Gamified Alchemy | [Visit](#)

- Developed a sleek, intuitive user interface with Tailwind CSS, allowing users to interact with the 3D world to mix ingredients and discover recipes.
- Architected the application state to efficiently manage user progress, discovered items, and unlocked features, ensuring a seamless blend between the UI and game progress.

GAMEHUB | [VISIT](#) | [GITHUB](#)

- Simple UI. Switchable between multiple games from the side menu.
- Implemented to showcase readiness in React.

## EDUCATION

### BACHELOR OF COMPUTER ENGINEERING

FROM MUMBAI UNIVERSITY |

VIDYAVARDHINI COLLEGE OF

ENGINEERING AND TECHNOLOGY

Expected June 2027 | Vasai, Mumbai

(other Semester results to be anticipated)

sem1 GPA: 6.3 / 10.0

## SKILLS

### PROGRAMMING

3+ years:

Python • C/C++

1+ years:

PHP • JavaScript

1.5+ years:

TypeScript • React(jsx, tsx) • SASS

### TECHNOLOGY

Git/Github • MySQL, PostgreSQL • Linux

RESTFUL APIS • Windows • node

Artificial Intelligence • VScode

## COURSEWORK

### UNDERGRADUATE

Ongoing

### UDEMY CERTIFICATIONS

Html, CSS, JavaScript, React

(did over 10+ such certifications of same category)

Javascript and Python stack

Bootstrap

React with aws

Aws Beginner

Cloud Computing Foundational

XML and AJAX more+

## MINI-PROJECTS

(clickable links, deployed projects)

A landing page for ai services

Holographic Library of Esoteric books

leetcode but better UI and new questions

Quiz web-app with animated solutions

An animated alchemy circle

A simple job post and apply site

## LINKS

Portfolio:// RayyanHassan

LinkedIn:// Rayyan