AAYUSH MOTIANI

PORTFOLIO LINK

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SUMMARY OF QUALIFICATIONS

- Git and Github
- Java, C#, HTML, CSS, Javascript, ARM 32-bit Assembly, Markdown, LaTeX
- Proficient in Game Development with the Unity Game Engine
- Skilled with design tools like Adobe Photoshop, Adobe Illustrator, Figma

EDUCATION

B.Sc in Computer Science

University of California, San Diego — Sep 2022-June 2026

Relevant Coursework: Accelerated Intro to CS & OOP in Java, Linear Algebra, Basic Data Structures and Algorithms, Software Tools and Techniques Laboratory, Computer Organization and Systems Programming, Calculus/Science & Engineering, Discrete Math, Introduction to Computing

Relevant Experience

<PROGRAMMING>

Garage Startup Program — 10/2023-12/2023

Maveric Studio, UC San Diego

- Created a VR world for **meta quest** and **android** called "Space Hunt", available on VRChat using the Unity Game Engine and several AI tools.
- Switched from 2D game development in Unity to **3D** and also learned to use the **VRChat** SDK in the game engine.
- Overcame the struggle of debugging scripts in **UdonSharp**, which was a new experience since I am proficient and habitual in using **C#**.
- The world consists of a space-shuttle room where you spawn. Next to the room is your mission control room from where you can choose your mission and go to the respective planet to finish it. The mission involves aliens who chase you, and you must hunt them down using **weapons** provided.
- Planning to add more explorable planets and missions, each of which gives the user more planets to explore and a variety of entertaining missions to embark upon. I also plan on enhancing the experience by adding flamethrowers, enemy blast effects, a vehicle to transport you to the planet and more!

Game Development Project — 06/2023-09/2023

- Built a 2D platformer using **Unity** and Visual Studio(**C#**). Programmed intricate **player movement mechanics**, advanced **physics**, raycasts, precise **collision handling and trigger detection**, friction, acceleration, variable jump**,** coyote time, **ledge detection** and **camera shake** into the game for a better player experience.
- Developed a **combat/weapon system**, allowing the player to throw and recall an ax (similar to God of War), fire a gun and use a melee sword strategically to kill enemies, destroy walls etc., enhancing gameplay dynamics.
- Designed all the assets and animations for the game in Adobe Photoshop and Illustrator.

<DESIGN>

Visual Design Apprenticeship — 01/2023-04/2023

Design Co (College Club)

- Utilized **Adobe Illustrator** and **Figma** to design several visually appealing and impactful designs on a weekly basis, strengthening my technical abilities and software expertise. Projects included posters, merchandise, UI/UX interfaces and many others.
- Consistency with work helped develop my 'eye' for design.
- Engaged in regular feedback sessions with senior mentors, applying their insights to enhance designs and cultivate a deeper understanding of best practices.

<RESEARCH>

Research Paper: Machine Learning Model for Crime Prediction — 6/2022-09/2022

Lumiere Education

- Developed a machine learning linear regression model using Python in Jupyter notebook to predict future crime locations. I cleaned and processed a large dataset from Kaggle for model implementation and training.
- Reduced the dataset from over 600,000 columns to a manageable 20,000 columns, ensuring efficiency and effectiveness in model training and testing. I then split the data into train, test and validation sets and tested it for accuracy. Achieved a **56%** accuracy in the prediction model.

</VOLUNTEERING>

Covid-19 Volunteer — 11/2021-12/2022

Karma Foundation

- Raised money to help the people of a cyclone-hit village and bought groceries and safety kits to help more than 100 families.
- Contributed remotely, where I was in-charge of their social media, content writing, data collection and tutoring kids with no access to education.
- During the COVID-19 pandemic, distributed masks and safety kits to people every week.