Rohit Punjabi

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Software engineer skilled in developing efficient and scalable solutions, with expertise in tools, client services, UI/UX enhancements, and telemetry systems.

WORK EXPERIENCE:

Software Engineer | Shrapnel | Seattle, WA, USA   February 2024 - September 2024
- Designed and implemented a friends and social system, enhancing in-game interaction and community building.
- Developed a weapon skin customization system, integrating game client and backend services for personalized player experiences.
- Built a telemetry system to track game events, collecting data to optimize mission progression and player achievement.
- Collaborated with game designers to analyze telemetry and metrics, refining gameplay mechanics based on player data.
- Worked with backend engineers to optimize database query performance in MongoDB
- Delivered 7 early access releases, contributing to key feature rollouts such as the friends system, persistent weapon skins, and overall game stability improvements.
- Tech Stack: C++, TypeScript, Unreal 5.3, MongoDB, Postman, Perforce.

Tools Software Engineer | Shrapnel | Seattle, WA, USA   August 2023 - February 2024
- Developed and enhanced user-requested features, improving tool functionality and UX.
- Led a UI/UX refresh for a user-generated content system, making it modern and intuitive.
- Built a web-based moderation tool to streamline content moderation, ensuring compliance with platform standards.
- Worked closely with artists and designers to make sure content pipelines aligned with production timelines.
- Delivered 3 early access releases, optimizing performance and usability.
- Tech Stack: Unity3D, C#, GitHub.

SKILLS:

Programming Languages	: C++, C#, TypeScript, GO, React, Python
Tools	: GitHub, Perforce, MongoDB, Postman, Visual Studio
Game Engines	: Unity3D, Unreal 5.3

EDUCATION:

Master of Science in Computer Science   May 2023
DigiPen Institute of Technology, Redmond, WA, USA

Bachelor of Engineering in Information Technology   May 2021
Thadomal Shahani Engineering College, Mumbai, MH, India

PROJECTS:

Programmer | 3D Custom Game Engine   September 2022 - April 2023
- Worked in an Agile development environment to make a 3D game engine from scratch.
- Implemented a robust game state manager that uses a stack-based approach to enable seamless and responsive transitions between stages.
- Implemented the car steering mechanic, including developing algorithms for calculating steering angles.
- Created an Audio System using FMOD Core API, enabling advanced audio functionality and enhancing the overall audio experience for players.
- Designed all UI textures that align with the game's theme and gameplay, enhancing the overall user experience.

Convolutional Neural Network (CNN)   February 2023
- Developed a CNN to classify images for image processing using Python, TensorFlow, and NumPy.
- Pre-processed data using normalization and image resizing techniques to optimize the model's performance.
- Visualized the results using accuracy and validation curves to gain insights into the model's performance.

AI Programmer | 2D Component-Based Engine   January 2022 – April 2022
- Developed a robust custom 2D game engine from scratch.
- Implemented 2D Collision Detection algorithms such as AABB and circle collision detection.
- Developed a modular and reusable custom behavior tree architecture, implementing behavior nodes like conditional checks, composite nodes, and decorators for use across game objects.
- Developed an Input Handling system using Lua Scripting to provide a flexible way to map inputs to in-game actions.
- Implemented engaging and challenging game mechanics like water puddles and vortexes.