Vrij Patel

Software Engineer

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Technical Skills

Tools: Unreal Engine, Unity, Jira, Confluence, GitLab, Perforce, RenderDoc, Jenkins
Languages: C++, Objective-C, C#, Java, HLSL, GLSL, Unreal Blueprints
Platform: Windows, MacOS, IOS, Android, Xbox, Play Station, Linux
Software Engineering Skills: Data structures and algorithms, Entity-Component-Systems (ECS)
Design Patterns: Singleton, Command, Bridge, Factory, Prototype, Component, State, Object Pool, Iterator

About Me

At the moment, I'm working on a 3D Cross-Platform and Cross-Hardware rendering layer for a company called The Forge Interactive, Inc. My objectives involve enhancing my leadership abilities and technical expertise, all while enjoying the process of learning and growing.

Work Experience

The Forge Interactive – Graphics Engineer | January 2024 TO ONGOING

Working on a Rendering Framework that supports Windows, MacOS, IOS, Android, Linux, Xbox, Play Station (PS4, PS5, PS4 Pro), Switch, and Steam Deck.

- Worked on a project for Google, using WebGpu to create a scene that runs on both Windows and Android at a high fidelity.
- Addressed and resolved issues across various platforms, including but not limited to Hair Simulation, SRGB gamma issues, and Depth buffer precision issues.
- Debugged performance in raytracing for PS5, Xbox Series X, this process involved reading AMD RDNA instructions to fix/optimize. Solutions to increase the path tracing performance.
- Implemented performance tracking in Metal API. Fixed bugs related to Metal API for hair rendering.
- Extended Linux input for gamepads to Steam Deck (Implementing/Updating HID + Linux Input System).
- Created scripts that helped with diskspace consumption on automated testing for all platforms from phones to consoles.

Integration Innovation Inc. (i3) – Software Engineer | August 2023 TO January 2024

Note: I cannot go into depth on what I specifically worked on.

- Worked with Unity to develop simulations aimed at ensuring our nation's security.
- Collaborated with Instructional Systems Designers to enhance the learning potential of clients' users.
- Worked with Magic Leap 2 to port 3D unity scenes into AR and create a seamless workflow.
- Optimized geometry (fewer draw calls) for better performance in AR. (Compute Shaders)

Education

Bachelor of Computer Science | SEPTEMBER 2021 to MAY 2023
Full Sail University of Game Development; Winter Park, FL