SHREYAS NISAL

Associate Game Dev Automation and Stability Engineer
id Software

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I'm an associate engineer at id Software working on cross-platform engine tools for automated testing in id's proprietary game engine. I'm passionate about game development and have shipped games to Steam, working on teams using Unity and Unreal along with developing multiple custom engines. Previously, I've worked as a software engineer at Twilio and as a research intern at multiples labs and published at top human-computer interaction conferences. I've also created educational programming content on YouTube with over 200,000 views.

EXPERIENCE

Associate Game Dev Automation and Stability Engineer — **id Software**
C++ | ImGui | Qt — **Dec 2025 – Present**

- Developed engine tools used in automated tests for gameplay, lighting and cinematics in id's proprietary game engine.
- Contributed to external tools for running cross-platform automated tests and capturing console and telemetry data.

Software Engineer — **Twilio**
Java | AWS — **Aug 2022 – Feb 2023**

- Developed REST API endpoints in Java for role-based access control for Twilio users and authored unit and cluster tests running in Jenkins.

Research Intern — **Hearty Adventures in Food and Play Lab**
PI: Dr. Rohit Ashok Khot — **Mar 2023 – Jul 2023**

- Developed a React PWA game for mobile devices with Firebase for authentication and storage to encourage real-world activities that support gut health.
- Contributed to the game's design to fit the research goals and written material submitted at conferences.

Research Intern — **MIT Media Lab (Fluid Interfaces)**
PI: Prof. Pattie Maes — **Feb 2022 – Jul 2022**

- Designed and developed a neurofeedback protocol for affective brain-computer interfaces focused on anxiety management with data obtained over the Lab Streaming Layer (LSL) from electroencephalography headsets.
- Designed a study to test the effectiveness of the neurofeedback protocol and ran over 20 hours of participant studies.

Research Intern — **Exertion Games Lab**
PI: Prof. Florian 'Floyd' Mueller — **Jul 2021 – Dec 2021**

- Explored Electrical Muscle Stimulation (EMS) for novel interactions between users and systems.
- Designed social bodily games using EMS to study shared agency between multiple users and the EMS system.

Software Engineering Intern — **Twilio**
Java | AWS | Vaadin — **Jun 2021 – Jul 2021**

- Developed API endpoints for role-based access control for Twilio users.
- Created user interfaces in Java using the Vaadin framework for internal Twilio tools.

EDUCATION

Southern Methodist University, Guildhall — **Aug 2023 – May 2025**
Master of Interactive Technology in Digital Game Development
Specialization: Software Engineering

Birla Institute of Technology and Science, Pilani — **Aug 2017 – Jul 2022**
Master of Science, Physics
Bachelor of Technology, Computer Science

PERSONAL PROJECTS

NeoRey: Custom C++ Game Engine and Editor — **Aug 2023 – May 2025**
C++ | ImGui | DirectX 11

- Developed a custom game engine with an editor built using ImGui with runtime reflection, hot-reload for game DLLs and an Entity Component System (ECS).
- Wrote python scripts for reflection code generation and enum mapping from custom annotations.
- Authored custom 2D and 3D physics libraries with script callbacks for collision and trigger events.
- Created a scripting API for game code to modify components and control animation states.
- Entity and component serialization with scene saving in a custom binary file format.

ArchiLeap: VR Platformer with an In-game Level Editor **Aug 2024 – May 2025**

C++ | DirectX 11 | OpenXR

- Engineered a reusable VR system using OpenXR and used it to integrate VR in past projects.
- Implemented first-person platformer mechanics using custom physics utilities with intuitive 6-DoF VR interactions.
- Built a designer-friendly in-game level editor for User-Generated Content (UGC) with Perforce support for collaboration.
- Polished the PC and VR editing experience through iterations with designers and usability testing feedback.

Rey Web Engine: Custom JavaScript Engine **Jan 2025 – May 2025**

JavaScript | WebGL | WebXR

- Developed a custom in-browser game engine with a WebGL rendering pipeline supporting 2D and 3D rendering.
- Created math and physics utilities and core engine classes including a custom parser for 3D models from OBJ files.
- Used the engine to build an in-browser 3D scene with immersive VR support and a 2D top-down physics-based game.
- Implemented a GitHub workflow for automatic engine and per game versioning using commit message parsing.

COLLABORATE PROJECTS

Lead Programmer (Imvi: Echoes of Harmony) **Jul 2024 – Dec 2024**

Unreal Engine 5.4 | C++ | Blueprints Team Size: 23

- Collaborated on 3C's challenges for a third-person open-world exploration game with Unreal custom gravity.
- Worked with cross-discipline teams on implementing game mechanics and system design for space traversal.
- Handled sprint planning and backlog refinement in Jira, milestone delivery documents and progress presentations.
- Set up a Python script for daily builds using Unreal Automation Tool (UAT) and uploads to Steam and Epic Games Store.
- Worked on customizing the Advanced Menu System for the custom game UI.
- Tackled game optimization using Unreal tools and Trace server for shaders, lights, Niagara VFX and Unreal Landscape.

Programmer (Fastival) **Jan 2024 – Jun 2024**

Unreal Engine 5.3 Team Size: 50

- Supported cross-discipline teams on urgent and high-priority tasks on race logic, UI and optimization.
- Implemented multiplayer controls for menu UI with UMG and Enhanced Input System.
- Built windows executables and managed configuration for Linux builds for Steam Deck compatibility.

Programmer (DonuTilt) **Sep 2023 – Dec 2023**

Unity | C# Team Size: 5

- Authored input mechanics for the game involving tilt-based controls using Unity Input accelerometer with dead-zone correction and tap-based mechanics for world-gravity shifting.
- Created the game's UI with settings stored across user sessions on Android devices.
- Collaborated with a programmer, an artist and a designer to establish the game's mechanics and design goals.

PUBLICATIONS

Shared Bodily Fusion: Leveraging Inter-Body Electrical Muscle Stimulation for Social Play | ACM Digital Library **DIS 2024**

Go-Go Biome: Evaluation of a Casual Game for Gut Health Engagement and Reflection | ACM Digital Library | YouTube **CHI 2024**

Joie: A Joy-based Brain-Computer Interface (BCI) | ACM Digital Library | YouTube **UIST 2023**

Demonstration of Joie: A Joy-based Brain-Computer Interface (BCI) with Wearable Skin Conformal Polymer Electrodes | ACM Digital Library **UIST 2023**

Fused Spectatorship: Designing Bodily Experiences Where Spectators Become Players | ACM Digital Library | YouTube **CHIPlay 2023**

TouchMate: Understanding the Design of Body Actuating Games using Physical Touch | ACM Digital Library | YouTube **CHIPlay 2022**