

M Hassan Ali

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Senior WebGL Developer

I started my career building HTML5 games. Today, I am a WebGL Developer with 5+ years of professional experience developing interactive 2D/3D games and applications. I work remotely from Lahore, Pakistan and have collaborated with teams across Europe and the United States.

Throughout my career, the products I have built have been used by multinational corporate clients and organizations.

Experience

Humble42 | Lahore, Pakistan

Senior WebGL & Full Stack Engineer (May 2024 – June 2026)

- Led the 3D side of a real time product configurator handled everything from the Three.js renderer to the React UI layer sitting on top.
- Rewrote critical rendering paths to use instancing and batching; cut draw calls significantly and brought frame rates way up on low end machines.
- Wrote custom GLSL and WGSL shaders for materials, lighting and post processing also ported a few legacy shaders from GLSL to WGSL when we started experimenting with WebGPU.
- Architected a Turborepo monorepo that connected Three.js frontends, Next.js dashboards and Node.js APIs. Cut build times and made sharing code between services trivial.
- Slash 3D asset load times by roughly half with KTX2 textures, Draco compression and a smarter client side caching strategy.

Virtual Days | Remote

Senior Software Engineer (Dec 2022 – May 2024)

- Built a browser based virtual meetup platform, think Zoom but with 3D spaces where people actually wanted to hang out.
- Wrote GLSL shaders from scratch for dynamic lighting, skyboxes and interactive objects across the PlayCanvas scene.
- Designed the multiplayer sync layer with Colyseus and WebSockets; handled concurrent users with smooth position/rotation interpolation.
- Wrapped the 3D view in a React shell and made sure the canvas didn't choke the UI thread resizing, rerendering and responsiveness all felt native.
- Knocked 30% off initial load time by compressing textures and lazy loading assets based on a user's proximity in the 3D space.

Geniteam Solutions | Lahore, Pakistan

Software Engineer (Jul 2022 – Nov 2022)

- Shipped multiplayer HTML5 games with PlayCanvas and Phaser. Handled real time networking via Colyseus and Photon.
- Built admin dashboards with Next.js and Express to manage game sessions, leaderboards and player analytics. Used MongoDB for persistence and Redis for caching real time session data.
- Debugged physics and rendering for both 2D and 3D browser titles.

Associate Software Engineer (Aug 2021 – Jun 2022)

- Developed 3D product configurators for e-commerce clients users could swap colors, materials and lighting in real time.

- Profiled frame rates with Chrome DevTools and Spector.js. Reorganized scene graphs and merged static geometry to slash draw calls.
- Built procedural mesh generation so products could be customized on the fly while they can change dimensions, add or remove parts, all at runtime.
- Performed performance analytics (FPS, load time, memory usage) so we could catch regressions before they reached production.

Software Engineer Intern (May 2021 – Jul 2021)

- Contributed to game features across multiple browser titles handling player controls, collision responses and interactive object behaviors in both 2D and 3D scenes.
- Worked on gameplay systems like checkpoints, collectibles and camera transitions. Also refactored asset loading so levels assets could be managed.
- Worked on core game features for browser based titles and implemented power up pickups, player respawn logic and in game score tracking using PlayCanvas and Phaser.
- Helped build and tweak game mechanics like player movement, jump physics and enemy AI behavior. Also fixed edge case bugs that were breaking level progression.

Fauji Fertilizer Company | Sadiqabad, Pakistan

Web Developer Intern (Jul 2019 – Aug 2019)

- Built internal dashboards with React and Vue.js, hooking them up to REST APIs for displaying enterprise data.
- Focused on responsive layouts, form validation and making sure everything looked consistent across screen sizes.

Education

National University of Computer and Emerging Sciences (FAST-NUCES)

Bachelor of Science in Computer Science

TECHNICAL SKILLS

Languages:

TypeScript, JavaScript

3D & WebGL Graphics:

Three.js, React Three Fiber (R3F), PlayCanvas, Phaser, Cocos Creator, GLSL, WebGL, WebGPU

Multiplayer Frameworks & Libraries:

Colyseus, Photon, Socket.io, WebRTC, WebSockets

Frontend Frameworks & Libraries:

React, Next.js, Vue.js, Redux, Zustand

Backend Frameworks & Libraries:

Node.js, Express.js, Drizzle ORM, REST APIs

Databases:

MongoDB, PostgreSQL, Firebase, Supabase

Architecture & DevOps:

Git, CI/CD, Performance Optimization, AWS, NPM