Vipin Pathak

Creative Developer

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GitHub · LinkedIn · X · Portfolio

SUMMARY

Creative developer specialising in real-time 3D experiences for the web, with a focus on GLSL shaders, GPU-driven particle systems, and interactive product experiences using Three.js and WebGL. Currently building a production 3D apparel customisation platform at Lovoj alongside freelance WebGL work for design studios. GitHub Developer Program member, with a growing WebGL sketchbook and open-source shader work used and forked by other developers.

EXPERIENCE

Three.js Developer — Lovoj Technology Pvt Ltd, New Delhi

June 2025 – Present

- Build and maintain a production 3D apparel customisation platform in Three.js — real-time in-browser preview of custom clothing, shipped across ~30 garment types.
- Engineered the runtime material and texture pipeline — UV-mapped artwork placement, dynamic texture compositing and PBR material swapping — so design changes render instantly with no page reload.
- Own the front-end 3D architecture end to end: scene graph, glTF/Draco asset pipeline, lighting and environment setup, and cross-device performance tuning.
- Cut initial scene load from 5s to 1s with Draco mesh compression, KTX2 texture compression and lazy asset loading.

Freelance Creative Developer — Polify, Web3 Creative Studio

May – July 2026

- Sole developer on polify.xyz — a WebGL-first site in vanilla JavaScript, Three.js, Motion and Lenis, taken from empty repo to production.
- Rendered the studio's full case archive — ~100 stills and looping videos — as one infinitely draggable Three.js grid with momentum, seamless wrapping and hover-driven shader transitions.
- Packed every thumbnail and video frame into GPU texture atlases addressed by a per-tile index and refreshed against the viewport, so the wall draws in a handful of calls and texture memory stays flat while dragging the archive.

SELECTED PROJECTS

Three.js Sketchbook

Live ↗

Three.js · GLSL · cannon-es · GSAP · Lenis · Vite

- A 15-piece collection of WebGL studies — custom vertex/fragment shaders, GPU particle systems and rigid-body physics — each written from scratch and deployed as a standalone scene.
- Built on a shared scene-loader architecture so each sketch drops in as an isolated module with its own lifecycle, controls and disposal.

Lusion Cursor Effect ★ 10 stars

Code ↗

Three.js · GLSL · Render Targets

- Reverse-engineered the fluid cursor interaction from award-winning studio Lusion.co using off-screen render targets and a custom distortion shader; my most-starred repository.

Hologram Shader ★ 8 stars

Live ↗

Three.js · GLSL · Lenis · GSAP

- Scroll-driven holographic model viewer with an animated fresnel and glitch shader, dynamic model transitions and smooth-scroll sequencing, tuned for consistent frame rates across browsers.

SKILLS

3D & Graphics	Three.js, React Three Fiber, WebGL, WebGPU, GLSL, TSL (Three.js Shading Language), Blender
Techniques	Custom shaders, GPU particles, render targets, post-processing, instancing, texture atlasing
Animation	GSAP, Framer Motion, Lenis, cannon-es (physics)
Frontend	JavaScript (ES6+), TypeScript, React, HTML5, CSS3, Tailwind CSS, Vite
Languages	C++, Python · Git & GitHub · Figma

EDUCATION

BE, Mechatronics Engineering — Terna Engineering College, Mumbai University · CGPA 8.36 — 2021 – 2025