Vipin Pathak

Creative Developer

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SUMMARY

Creative developer crafting real-time 3D experiences for the web with Three.js, GLSL and WebGPU/TSL. At Lovoj, I build 3D apparel configurators for web, kiosk, Android and iOS, and I've worked with studios around the world. My open-source shader work is used and forked by other developers, and AI agents like Claude Code and Codex are part of my daily workflow.

SKILLS

3D & Graphics	Three.js, React Three Fiber, Babylon.js, PixiJS, WebGL, WebGPU, Drei, React Postprocessing, glTF/GLB, Draco & KTX2, 3D configurators
Shaders	GLSL, TSL, WGSL, Compute shaders, Ray marching, Custom shaders
Rendering	PBR & lighting, GPU particles, Render targets, Post-processing, Instancing, Texture atlasing
3D Tools & XR	Blender, Spline, Figma, WebXR, Meta Quest AR/VR, Unity
Animation	GSAP (ScrollTrigger, SplitText, Flip), Lenis, Locomotive Scroll, Barba.js, Motion, Theatre.js, Anime.js, Lottie, GLTF, skeletal & morph-target animation
Physics	cannon-es, Rapier, Ammo.js, Matter.js
Web & Code	JavaScript (ES6+), TypeScript, React, Node.js, HTML5, CSS3, Tailwind, Vite, Vercel, Supabase, Python, C++, Git & GitHub
AI	Claude Code, Codex, Cursor, Prompting & agent workflows

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.
- Developed a dynamic 3D configurator that runs on kiosks in real stores, and integrated it across Android and iOS, handling all of its GLB models.
- 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, environment and cross-device performance.
- Dramatically sped up initial scene loading 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, 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 so the wall draws in a handful of calls and texture memory stays flat while dragging.

SELECTED PROJECTS

Three.js Sketchbook FEATURED

Live ↗

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

- A growing collection of WebGL studies — custom vertex/fragment shaders, GPU particle systems and rigid-body physics — each written from scratch on a shared scene-loader architecture and deployed as a standalone scene.

Knitting Lab

Live ↗

Three.js · GLSL · Python · post-processing

- Garments knit themselves stitch by stitch in the browser: a custom vertex shader orders every stitch (spiral, bloom, cascade) and shades yarn down to the fibre, on Python-built sweater models.

Brickblaster

Live ↗

Three.js · JavaScript · Vite

- A story-driven arcade flight-combat game of ~13,600 lines: chapter director, scripted radio, boss fights, salvage-based ship upgrades, cinematics and checkpoints.

Studio Blank

Live ↗

Three.js · GLSL · GSAP · post-processing

- A 3D garment configurator concept: dye the cloth, print a graphic, turn it over and check out, with depth of field, ambient occlusion and bloom.

Also: Codevember 2026 (daily WebGPU/TSL studies) · Lusion Cursor Effect ★ 10 · Hologram Shader ★ 9

EDUCATION

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

2021 – 2025