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Portfolio: https://jackadamczyk.vercel.app | GitHub: https://github.com/Adamjackczyk | LinkedIn: https://www.linkedin.com/in/jack-adamczyk

SUMMARY

Frontend-focused developer building modern UI with React, TypeScript, Next.js, and Tailwind CSS, with strong Three.js + GLSL depth (GPGPU simulation, procedural flow fields, real-time shader effects). Ships production-minded work that's deployed, versioned, and structured for iteration.

SKILLS

React, TypeScript, Next.js, Tailwind CSS, Vite, Three.js, GLSL (vertex/fragment/compute), GPUComputationRenderer, GLTF/Draco, Blender, Vitest, Storybook, Node.js, Git, GitHub Actions

EXPERIENCE

Software Engineer Extern (Remote) | Electric City Aquarium & Reptile Den (TripleTen Externship) | 2025

- Built a visitor-facing kiosk app using React + TypeScript and implemented i18n language toggles.
- Improved maintainability with Storybook docs, Vitest tests, and PR-based teamwork in a 5-person Agile sprint team.

PROJECTS

GPGPU Flow Field Particles (Three.js, GLSL, GPUComputationRenderer)
Live: https://adamjackczyk.github.io/THREE-gpgpu-flow-field-particles-shaders/

- Built a GPU particle simulation to animate thousands of particles by updating positions in a compute shader (no CPU loops).
- Preserved model identity using Draco-loaded GLB vertex positions + vertex colors streamed into GPU textures and attributes.

Particle Morphing Shader (Three.js, GLSL, Blender)
Live: https://adamjackczyk.github.io/THREE-particles-morphing-shader/

- Built GPU-driven particle morphing by blending multiple target geometries in GLSL for smooth real-time transitions.

- Normalized mismatched meshes by merging multi-mesh GLTF scenes and resampling vertex counts for consistent morph behavior.

Wobble Material (PBR + GLSL) (Three.js, Custom Shader Material)
Live: https://adamjackczyk.github.io/Wobble/

- Injected GLSL vertex deformation into MeshPhysicalMaterial to keep PBR lighting/reflections while wobbling on the GPU.
- Fixed shading + shadows by recomputing normals in-shader and using a wobble-enabled custom depth pass.

EDUCATION

Columbus State University – B.S. Computer Science (In Progress, Junior)
TripleTen – Software Engineering Certificate (2025)