Lucas Johnson

Senior Front End Engineer

Contact

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🧭 portfolio.lucasdamianjohnson.dev

Skills

TypeScript, JavaScript, HTML, CSS, PHP

React, Next.js, Webpack, Node.js

3D, WebGL, WebGPU, GLSL, WGSL, glTF

Babylon.js, Three.js, React Three Fiber

SVG, CSS Animations. CSS 3D

C#, Unity, Blender, Lens Studio

MySQL, Postgres, MongoDB, PostgreSQL, APIs, Databases

Linux, Web Hosting, Apache, Nginx

Web Design, Web Development

Design Patterns, Performance, Data Structures, Voxels

Education

Michigan Technological University

Houghton, MI | 2015 – 2020

Associate of Arts in Humanities with a Minor in Computer Science

Cumulative GPA: 3.47 | Major GPA: 3.57

Completed extensive coursework towards a Bachelor's degree in Computer Science and Sound Design and accumulated over 120 credit hours.

Experience

Senior Frontend Engineer

First Intelligence | Remote | August 2024 – Present

- Designed and implemented advanced animated landing pages, enhancing user engagement and visual appeal.
- Developed custom animations and interactive components for a Next.js site, optimizing performance and user experience with efficient code and best practices.
- Collaborated with designers and backend developers to integrate APIs and ensure seamless functionality across the application.
- Utilized React, TypeScript, and modern JavaScript frameworks to build immersive web applications.

Freelance Game & Lens Developer

Snapchat, Niantic, & Mouse Pack | Remote | May 2024 – July 2024

- Commissioned by Mouse Pack to develop a game and documentation for Niantic's new Unity like platform, creating an immersive 3D environment with animated vegetation and dynamic lighting.
- Created a global Snapchat Lens for International Friendship Day using Lens Studio, incorporating augmented reality (AR) features to engage millions of users worldwide.
- Collaborated closely with clients to meet project specifications and deliverables within tight deadlines.

XR Game Developer

Niantic | Remote | September 2023 – December 2023

- Collaborated with a multidisciplinary team to develop an XR game, contributing to both front-end development and architectural design.
- Architected the overall code structure of the application, ensuring scalability, maintainability, and performance optimization.
- Built a custom Entity Component System using React Three Fiber, enhancing the modularity and reusability of code components.
- Developed cross-platform XR user interfaces, optimizing for performance and user experience across various devices.

Senior Software Engineer

BitReel | Remote | November 2022 – July 2023

- Collaborated directly with the CTO to develop a custom real-time graphics application using Babylon.js, focusing on performance optimization and advanced rendering techniques.
- Wrote a custom GLB parser and mesh database system, significantly improving asset loading times and resource management.
- Increased performance and uptime of the Babylon.js application by implementing efficient code practices and optimizing rendering pipelines.

Experience Continued

Full Stack Developer

eTools | Michigan | February 2022 – February 2023

- Built and maintained high-traffic e-commerce websites for top-tier clients, handling millions of daily visitors using PHP and JavaScript.
- Resolved data issues and optimized database performance, leading to increased sales and customer engagement.
- Worked with clients directly and managed their Action Trucks client, an international automotive aftermarket seller based in Canada.

Web Programmer

University Marketing and Communications at Michigan Technological University | Houghton, MI | 2017 – 2020

- Collaborated with graphic designers, writers, videographers, and web developers to enhance the university's online presence.
- Assisted in backend tasks and upgrades and built tools and APIs with PHP.
- Built new tools and expanded CMS features using JavaScript, including rebuilding the image cropping gadget and creating utility gadgets for content management.
- Improved website accessibility, SEO, and performance by implementing best practices in web development.

Hackathons & Projects

MIT Reality Hack

Massachusetts Institute of Technology (MIT) | Boston, MA | February 2024

- Developed a VR game in Unity where players use a switchboard to connect to different realities and listen to their conversations.
- Collaborated with a multidisciplinary team of designers, sound engineers, and artists to create an immersive virtual experience.
- Integrated and optimized 3D models from the artist into the game, ensuring high performance and visual quality.

Open Source Projects & Games

2021 – Present

Divine Voxel Engine

- Creator and Lead Developer of an open-source, multi-threaded voxel engine written in TypeScript.
- Implemented advanced rendering techniques to efficiently handle complex voxel data and models, enhancing performance and scalability.
- Optimized using multi-threading processes to improve rendering speeds, resulting in smoother real-time interactions.
- Managed an open-source community, overseeing contributions, and maintaining comprehensive documentation.

Crystalline Bliss

- Developed and published to Steam a 3D multiplayer voxel puzzle game utilizing my voxel engine.
- Designed engaging gameplay mechanics that blend puzzle-solving with a voxel-based environment.
- Implemented multiplayer functionalities, enabling real-time gameplay between players.
- Handled the end-to-end publishing process on Steam, including marketing strategies and user feedback integration.
- Utilized technologies such as TypeScript, WebGL, and networking protocols to create an immersive gaming experience.

Husky Game Development Enterprise

Michigan Technological University | Houghton, MI | September 2016 - May 2017

- Led a multidisciplinary team to develop a 2.5D mobile platform game using Unity and C#.
- Served as Team Lead and Technical Director, coordinating efforts between programmers, artists, and sound engineers.
- Implemented Wwise for advanced sound integration, enhancing the game's audio experience with dynamic sound effects and music.
- Collaborated on game design elements, contributing to level design, character development, and gameplay mechanics.
- Managed version control and project timelines, ensuring milestones were met and the project stayed on schedule.