

Ashley Cook

Frontend Engineer & Rendering Specialist

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Frontend engineer with 7+ years of experience building React and TypeScript applications ranging from interactive browser experiences to enterprise SaaS platforms. Specialised in performance-sensitive frontend applications, modernising large codebases, and developing rendering systems using Canvas, Pixijs and WebGL.

<https://ashley-cook.dev> • <https://github.com/users/AshsHub> • [linkedin.com/in/ashley-cook-00a37a138/](https://www.linkedin.com/in/ashley-cook-00a37a138/)

Work Experience

Structureflow, Canvas Developer

August 2023 - June 2026 (2 Years, 10 Months)

- Migrated StructureFlow's enterprise SaaS diagramming platform from SVG to Canvas, enabling enterprise customers to work with diagrams containing thousands of nodes through spatial partitioning, viewport culling, and texture caching.
- Designed and implemented reusable React component architectures supporting metadata management, navigation, rich-text editing and operational workflows within a large enterprise diagramming platform.
- Designed and implemented core Canvas rendering and interaction systems supporting enterprise-scale diagram editing, including rendering behaviours, hit-testing, selection, editing workflows and viewport interactions for diagrams containing thousands of nodes.
- Designed migration tooling and resolved compatibility challenges across multiple generations of platform data schemas, enabling long-lived enterprise customer data and complex client workflows to migrate safely to the modern platform.
- Designed and implemented extensible import and export pipelines supporting seven enterprise document formats including PowerPoint, Excel, Word, CSV, PDF, plain text and images, while handling data transformation between external document structures and the internal graph model.
- Implemented graph algorithms for computing shareholder ownership across complex arbitrary ownership structures, cyclic relationships and nested hierarchies.
- Worked directly with multiple enterprise B2B SaaS customers throughout their trial period, investigating production issues and delivering dozens of bespoke features that secured their long-term adoption of the platform.
- Resolved 14 production issues in the first 8-9 working days after joining, showing rapid onboarding and immediate contribution in a large codebase,
- Used AI-assisted development tools including GitHub Copilot and Claude to accelerate debugging, investigation and feature implementation across a large enterprise codebase.

Playco, Midweight *Game Engineer*

September 2021 - March 2023 (1 year, 7 months)

- Sole developer of the open-source Pixijs game [BUBBO BUBBO](#) designing the architecture, tooling and rendering systems from prototype through production.
- Collaborated directly with Pixijs maintainers on experimental WebGPU and WGSL rendering technologies, browser rendering pipelines and graphics performance improvements.

Frontend

React
TypeScript
JavaScript (ES6+)
HTML5
CSS3

Graphics & Rendering

Canvas API
Pixijs
WebGL
GLSL
Rendering Optimisation

Backend & Platform

Node.js
REST APIs
Git / Github

Architecture & Engineering

Frontend Architecture
Component Architecture
Legacy Modernisation
Data Migration

Enterprise Development

Enterprise SaaS
B2B SaaS
Production Support
Performance & Optimisation

Workflow

Agile / Scrum
Cross-functional Collaboration
AI-assisted Development
Jest
Figma
Jira

- Developed frontend applications and interactive browser experiences using JavaScript (ES6+), Pixijs, WebGL and GLSL shaders, implementing GPU-accelerated rendering techniques for performance-sensitive applications.
- Developed and maintained JavaScript (ES6+) frontend applications for Facebook Instant Games, Discord, Zoom and HTML5 browser platforms, delivering cross-platform interactive experiences.
- Used player analytics and A/B testing results to prioritise frontend improvements and refine gameplay mechanics based on user behaviour.
- Successfully ported "Ask Away" to the Discord from Zoom platform, making the game available to a different community on a different platform.
- Collaborated within a small-to-medium-sized multidisciplinary team to deliver high-quality games within tight delivery timeframes.

Goodboy Digital, Midweight Game Developer

November 2018 - October 2021 (3 years)

- Developed interactive browser experiences for organisations including the **BBC¹**, **Saudi Aramco** and **Škoda²**, delivering projects used by large public audiences and international brands.
- Built rendering-heavy browser experiences using WebGL, custom GLSL shader effects, and advanced visualisation techniques.
- Developed Progressive Web Applications and mobile AR experiences using modern JavaScript, implementing responsive frontend architectures and experimental rendering systems.
- Developed browser-based applications, games and interactive marketing experiences for commercial clients using modern JavaScript and WebGL.
- Migrated legacy Adobe Flash applications to modern HTML5 and JavaScript, including The Impossible Quiz, extending product lifespan while restoring compatibility across modern browsers and devices.
- Collaborated with artists, designers, and developers to transform creative concepts into polished interactive experiences.
- Contributed to both client-facing projects and internal R&D initiatives exploring new rendering techniques and browser capabilities.

Personal Projects

Physics Sandbox, Frontend Developer

- Built an interactive physics sandbox using React, TypeScript, Canvas API, Zustand, and Matter.js, combining UI state management with real-time rendering and physics simulation.
- Designed a desktop-style editor architecture comprising reusable React components, inspector panels, creator tools, toolbars, context menus, keyboard shortcuts, theming and persistent workspace state.
- Implemented an extensible command system supporting undo/redo, copy/paste, prefab spawning, object editing, batching, and command logging.
- Developed custom canvas interaction systems for selection, drag-box multi-select, object movement, camera panning/zooming, fit-to-view, stamping, and cursor/context-aware controls.
- Optimised and structured a complex frontend codebase with feature-based CSS, reusable UI components, configurable constants, saved scenes, prefab workflows, and test coverage.

Education

University of Lincoln, Lincoln— BSc Games Computing (Hons)

September 2015 - May 2018

First Class Honours

Specialisms

Rendering systems, graphics engineering, browser visualisation, WebGL and shader-driven rendering, Pixijs architecture, frontend performance optimisation, and interactive web applications.

Interests

Graphics and rendering technologies, AI-assisted development workflows, Procedural content generation (PCG), Interactive web experiences, Emerging frontend technologies, Game jams and rapid prototyping

Awards

¹ [The Dumping Ground: Face Your Fears](#) nominated for a [TIGA award](#)

² [Skoda Enyaq IV Experience](#) won an [FWA Award](#)

Boston College, Boston— Level 3 Extended Diploma in IT (Software Development)

September 2013 - July 2015

D* D* D* (Triple Distinction Star)