

Sam Seabourn

Senior Software Engineer | Frontend Systems & Performance

Sydney, Australia · sam.seabourn@gmail.com · samseabourn.com · linkedin.com/in/samseabourn

Core Competencies: TypeScript · React · Redux · Node.js · JavaScript · Frontend Systems · Performance Engineering · Over-the-Top (OTT) · HTTP Live Streaming (HLS) · Video Streaming · WebOS · Tizen · Smart TV · Playwright · End-to-End Testing · Developer Experience (DX) · Systems Design · Open Source · React Hooks · REST APIs · OAuth 2.0 · PixiJS · Browser Extensions · Manifest V3 · Chrome DevTools Protocol (CDP)

PROFESSIONAL SUMMARY

Senior Software Engineer specialising in performance-critical frontend systems for resource-constrained environments. 4+ years architecting streaming infrastructure (1.6M+ users, 175+ platforms), designing internal tooling used across engineering organisations, and contributing to open-source projects (4x improvement to Google's Shaka Player). Expertise spans systems design, developer experience, video streaming and frontend performance engineering.

EXPERIENCE

Stan — Senior Software Engineer — TV Platforms *Apr 2022 – Present · Sydney, AU*

- ▶ Architect and maintain the core TV application serving **1.6M+ monthly users across 175+ platforms**. Senior member of a 6-person team owning Stan's entire Over-the-Top (OTT) platform, with responsibility for systems design, internal tooling, and developer experience.
- ▶ Design and build testing infrastructure and internal tooling used across the engineering organisation, enabling QA teams to validate video playback across heterogeneous hardware and reducing onboarding time through unified development workflows.
- ▶ Contributed **4x performance improvement** to Google's open-source Shaka Player HTTP Live Streaming (HLS) parser, improving video startup performance for constrained embedded browsers globally — used by YouTube, Disney+, and other major streaming platforms.
- ▶ Awarded **"No Stone Left Unturned"** (one of four annual awards across all Nine Digital properties) for exceptional technical contribution and measurable impact on streaming performance at organisational scale.
- ▶ Led device performance initiative bringing 2015 era hardware onto the latest app version through memory optimisation, rendering improvements, and JavaScript (JS) reduction — increasing supported device coverage by **30%**.
- ▶ Refactored legacy monolithic TV application into a modular, functional architecture, establishing patterns and conventions adopted across the team for ongoing feature development.
- ▶ Collaborate cross-functionally as a developer representative in the design system guild, deliver technical presentations on performance engineering, and mentor junior engineers on systems thinking.

Westpac — Frontend Developer (Contract) *Oct 2021 – Apr 2022 · Sydney, AU*

- ▶ Built responsive React components and micro-apps for internal banking systems, integrating frontend applications with backend APIs via Node.js controller layers.
- ▶ Implemented Jest test suites and supported junior engineers onboarding to internal tooling.

GRC Solutions — Frontend Developer *Oct 2020 – Oct 2021 · Sydney, AU*

- ▶ Led frontend modernisation of Salt LMS (**300K+ users**), rebuilding a 22-year-old legacy C# SCORM course player from vanilla JavaScript into React while maintaining backward compatibility.
- ▶ Architected OAuth 2.0 authentication system and collaborated closely with the backend team on API integration.
- ▶ Developed dashboards and reporting systems using React, TypeScript, Hooks, Context API, and Material UI.

Solentive — Junior Full Stack Web Developer *Jul 2019 – Oct 2020 · Sydney, AU*

- ▶ Built real-time weather visualisation for an aircraft rescue coordination platform, integrating NOAA data to display wind patterns and altitude-aware forecasts.
- ▶ Developed features for a strategic workforce planning platform used for enterprise forecasting.
- ▶ Implemented SharePoint document management integrations and authentication flows.

SELECTED PROJECTS

Playwright-Embedded *TypeScript · Playwright · Node.js*

- ▶ Developed an automated End-to-End (E2E) testing framework for embedded browsers on real hardware (Smart TVs, consoles) lacking Chrome DevTools Protocol (CDP) support.
- ▶ Engineered a custom orchestration layer to sync test execution across multiple physical devices without manual configuration.

Browsersaurs *TypeScript · React · PixiJS · Node.js · Vite · Spine2D*

- ▶ Built a creature collection game running entirely within a Chrome extension to explore high-fidelity graphics and procedural systems in constrained environments.
- ▶ Engineered multi-context architecture (Service Worker, Content Script, Popup, Game Hub) using typed message passing to synchronise state.

TECHNICAL SKILLS

Systems & Architecture

Platforms: Cross-platform frontend systems — 175+ device configurations: Tizen, WebOS, consoles

Specialisation: Performance engineering for resource-constrained environments

Tooling: Internal tooling and Developer Experience (DX) design

Architecture: Legacy modernisation and architectural refactoring

Core Engineering

Languages & Frameworks: TypeScript, JavaScript, React, Redux, Node.js — production systems at scale

Streaming: Video streaming platforms, Over-the-Top (OTT) systems, HTTP Live Streaming (HLS) playback optimisation

Testing: End-to-End (E2E) testing infrastructure — Playwright, custom orchestration for non-CDP devices

Graphics & Extensions: Real time graphics (PixiJS, Spine 2D), browser extension development (Manifest V3)

Leadership & Collaboration

Mentorship: Technical mentorship and knowledge sharing — org-wide presentations

Cross-functional: Design systems guild, QA infrastructure collaboration

Open Source: Google Shaka Player — 4x HTTP Live Streaming (HLS) parser performance improvement

EDUCATION

General Assembly — Software Engineering Immersive · Sydney, Australia