**Andrew Mason**

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As a dedicated Senior Design Engineer, I have a passion for creating captivating web experiences that blend visual storytelling, design and code. I thrive in collaborative environments, where I leverage my React, TypeScript, accessibility, and UI expertise to bring complex user interfaces to life, focusing on optimising performance and championing impactful storytelling.

## Skills

| Programming | Tools & Frameworks | Web Development | Software | Cloud & OS |
| --- | --- | --- | --- | --- |
| JavaScript - ESNextTypeScriptCSS - SassHTML5Node.js - DenoBash - Shell | React - PreactThree.js - Pixie.jsWebpack - EsbuildJasmine unit testsGit - PerforceCoherent Gameface | UX responsive designPerformanceMedia optimisationsWebGLProgressive Web AppsAccessibility - WAI | VSCodeChrome DevToolsFigmaPhotoshop - GimpIllustratorFFmpeg | AWS - Azure - GCPServerless functionsCDNs - REST APIsLinuxMacWindows |

## Experience

### UI Engineer | Rare Aug 2022 – Present

My role at Rare is to deliver [UI features for Sea of Thieves](https://coderonfire.com/work/rare-sea-of-thieves) and develop the UI for their next title, EverWild.

* Code UI components and services for Sea of Thieves using TypeScript, SASS and Coherent Gameface.
* Write comprehensive unit tests for all components and services in Jasmine.
* Collaborate directly with designers using Figma, turning designs into UI components.
* Optimise in-game UI performance and memory usage using Chrome DevTools and Xbox PIX captures.
* Author JSON data contracts and TypeScript definitions for Unreal event models.
* Improve workflow efficiency by analysing Node.js deployments, reducing UI unit test runtime by 90% and CI/CD UI build times by 16 minutes.
* Create animation and CSS filter prototypes demonstrating the functionality and performance impact of Coherent Gameface middleware for Rare's next-gen game, Everwild.

### Senior Prototyper | The Telegraph Jul 2018 – Apr 2022

Embedded in the Product team, collaborating with designers, journalists, and editors to create prototypes, tools, interactive web experiences, and visual storytelling:

* Created [Milton](https://coderonfire.com/work/telegraph-milton-figma-html-export-plugin), an SND award-winning open-source Figma plugin using TypeScript and React, enabling designers to convert designs into responsive HTML without developer involvement.
* Developed [“A Year in Lockdown,”](https://coderonfire.com/work/telegraph-scrolling-story-telling) an interactive scrolling story with a custom in-browser editor, achieving over 100K views and a 15-minute average dwell time, and an SND award.
* Built a [video-wall interactive](https://coderonfire.com/work/telegraph-video-wall) displayed in both the newsroom and lobby, animating real-time captures of the Telegraph’s homepage and print paper. TypeScript, React, and Pixi.js powered the front end, while the server used Node.js, Puppeteer, Google Cloud Functions, and Firebase.
* Developed a TypeScript and React single-page application, enabling video editors to create [embeddable animations using Lottie JSON](https://coderonfire.com/work/telegraph-lottie-animation-tool), complete with a GUI for customization and a self-contained HTML output.

### UI Engineer | Simpplr Feb 2018 – May 2018

* Developed UI components in React, Redux, and Immutable.js for a large-scale single-page application.
* Collaborated closely with UX designers in an agile environment.
* Authored REST JSON API specifications for Salesforce Database engineers.

### Creative technologist | The Guardian Nov 2011 – Oct 2017

Part of the Interactive team, I developed bespoke data visualisations and interactive experiences for spotlight stories:

* Led the technical delivery of several [virtual reality episodes](https://coderonfire.com/work/the-guardian-6x9-virtual-reality) for platforms such as Google Cardboard, Daydream, and Gear VR, including [development in Unity with PlayMaker](https://coderonfire.com/work/the-guardian-beat-the-hustler).
* Crafted [promotional landing pages](https://coderonfire.com/work/the-guardian-6x9-webgl-website) using JavaScript, WebGL, three.js, and animation libraries, building a custom debug GUI for camera motion and shader parameter scripting.
* Created live [election data-dashboards](https://coderonfire.com/work/the-guardian-scottish-independence-dashboard) in JavaScript and D3, backed by a Node.js engine using Google Sheets APIs, achieving over 500k views with sub-15-second latency on election night.
* Built React and Node.js workflow tools, enabling designers to upload illustrations to Amazon S3 buckets and generate embeddable iframe HTML.

### Front-end developer | BBC Apr 2010 – Nov 2011

* Developed UI components, including the main navigation carousel for the [BBC homepage redesign](https://coderonfire.com/work/bbc-homepage), using JavaScript, CSS, and PHP.
* Produced WCAG AAA compliant code, supporting a broad range of web browsers.
* Collaborated with UX designers to prototype and validate UI interactions.

### Senior developer | Digitas (AKQA) Mar 2008 – Apr 2010

* Managed UI development of a multilingual booking system in Dubai.
* Developed location-based websites using REST GeoIP location APIs and Postcode lookup services.
* Created and presented proof-of-concept prototypes for client pitches.
* Established an internal innovation lab to foster collaboration between design and development teams.

## Education

### BA (Hons) Creative Multimedia | Teesside University 2001 – 2005

* Developed a point-and-click adventure game with an audio-only interface for the visually impaired.
* Studied Human-Computer Interaction and multimedia creation, including video and audio production, 3D modelling, and web development.

## Personal interests

* Created an art project exploring [privacy and surveillance of webcams](https://coderonfire.com/work/experiments-room-47), inspired by Philip K. Dick.
* Developed a [glitch generation tool](https://coderonfire.com/work/experiments-glitchor) to experiment with databending of images and learn about JPEG compression artifacts.
* Passionate about both retro and modern video games, 8-bit computing, and 3D rendering technology.
* Engaged in the open-source community.
* Interested in the Demoscene, 64K demos, ROM hacking.
* Keen on reverse engineering, performance analysis, and internet security.