

Arsia Ardalan

Senior Frontend Developer

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SUMMARY

Frontend developer with experience building and debugging complex software across automotive embedded systems, data-intensive applications, and technical visualization platforms. Strong in React and TypeScript, with particular depth in cross-system debugging, frontend modernization, testing, and translating complex system behavior into usable interfaces.

EXPERIENCE

Frontend Developer, Maestro — Telesat (Lightspeed, Contract)

Jan 2026 – Aug 2026

- **Engineering visualization:** Contributed to Maestro, an internal NOC application for Telesat Lightspeed, translating satellite-network concepts including inventory, candidate links, topology, resource allocation, and time-series system state into dashboard and visualization workflows.
- **Frontend architecture & standards:** Authored substantial portions of the frontend HLD and ADRs, including component/data-flow diagrams, API contracts, project structure, coding standards, and integration boundaries across React and backend services.
- **AI-driven development:** Worked extensively in an AI-first delivery model, using agentic AI tools to prototype UI, generate implementation and tests, and accelerate iteration; introduced a TDD-oriented workflow to review and validate AI-generated code against established microservice interfaces and expected behavior.
- **3D visualization POC:** Evaluated visualization approaches, recommended Cesium, and developed an internal globe prototype with node selection/follow, filtering, detail views, historical playback, navigation, and satellite-to-POP connection highlighting.
- **System resiliency:** Identified missing failure and degraded-service scenarios in system designs, prompting broader consideration of rollback, backpressure, outages, and recovery behavior across service HLDs.

Stack: React, TypeScript, Hono, Zod, Cesium, REST, gRPC, Protocol Buffers, Vitest, React Testing Library, Shadcn, Claude Code, Qodo, JFrog, Git

Senior Frontend Developer — Ford Motor Company (SYNC Infotainment, Contract)

Jun 2024 – May 2025

- **Cross-system P0/P1 debugging:** Volunteered for release-critical defects and traced failures across React, Redux, MQTT, native services, and vehicle systems; resolved a long-running F-150 seat/mirror issue ultimately rooted in a BCM integration mismatch.
- **React 18 & test modernization:** Major contributor to the React 18 migration across roughly 10–11 SYNC applications; repaired and standardized ~900 Jest tests, shifting brittle React 16 implementation-based tests toward behavior and specification-based validation.
- **Performance analysis:** Investigated frame drops, unnecessary renders, oversized data dependencies, and long event-loop tasks; the React 18 rollout reduced screen startup from ~13s to ~8s and improved view responsiveness by roughly 35%.
- **CAN debugging tooling:** Built a Python utility that mapped target CAN signals to source modules, traced signal definitions, plotted results, and exported reports, replacing a tedious one-signal-at-a-time investigation workflow.
- **Delivery & collaboration:** Shipped production bug fixes and infotainment/safety behavior, including driver-state screen restrictions; worked daily with embedded, QA, and design teams, presented failure sequences against Ford specifications, and performed extensive code review and mentoring.

Stack: React, TypeScript, Redux, Redux-Saga, MQTT, REST APIs, Jest, React Testing Library, Styled Components, Storybook, Python, CAN, C++, Linux, Git

Frontend Developer, Platform — Ross Video

Feb 2023 – Aug 2023

- **Abstractions & code reuse:** Designed a React component library using Domain-Driven and Hexagonal architecture, reducing duplication and improving modularity across the platform.
- **Legacy modernization:** Led migration of a Java (JSP)-based UI to React, cutting feature delivery time by 50% and eliminating a sustained source of technical debt.
- **Developer tooling & mentorship:** Built CLI tooling that reduced scaffolding/onboarding overhead by 70%, and provided detailed code reviews and knowledge-sharing sessions for junior developers.

Stack: React, TypeScript, Redux, Jest, Java, MySQL, PostgreSQL, MaterialUI, Storybook, Styled Components, Git

Frontend Developer, Platform — Ross Video

Sep 2020 – Sep 2022

- **Component platform:** Spearheaded development of a performant, WCAG-compliant TypeScript/React component library powering multiple enterprise products.
- **Developer tooling:** Created an org-wide project-bootstrapping CLI that cut new-project setup from ~120 minutes to under 1 minute.
- **Testing & leadership:** Built unit and end-to-end coverage with Jest, Testing Library, and Playwright; mentored co-op students/new hires and served as Scrum Master for ceremonies.

Stack: React, TypeScript, Redux, Jest, Playwright, Storybook, Styled Components, Webpack, CircleCI, Git

Web Developer — Canopy Growth Co.

Mar 2019 – Sep 2020

- **Web platforms:** Delivered high-performance marketing websites with complex animations and production-grade frontend implementation.
- **Cloud & observability:** Managed AWS infrastructure with Terraform and CI/CD; built and documented a Grafana dashboard for production-line health monitoring that remained in active use after handoff.

Stack: React, JavaScript, Jest, AWS, Terraform, Grafana, AWS Amplify, Figma, Git

Software Application Developer — iSight

Apr 2017 – Jan 2018

- **Backend services:** Designed and maintained Node.js microservices for custom business logic and served as lead on-call developer for incident response and uptime.
- **Data systems:** Administered PostgreSQL and MySQL databases, maintaining data integrity and query performance under production load.

Stack: Node.js, JavaScript, PostgreSQL, MySQL, ElasticSearch, Jest, Git

TECHNICAL SKILLS

Languages: JavaScript (ES2020+), TypeScript, Python, HTML5, CSS3, Java, C++ (working familiarity)

Frontend: React, Redux, Redux-Saga, Next.js, Shadcn, MaterialUI, Storybook, Cesium, Styled Components, Tailwind

Testing: Jest, Vitest, React Testing Library, Playwright, Cypress, TDD

Systems & Data: Node.js, Hono, REST, gRPC, Protocol Buffers, MQTT, CAN, Zod, PostgreSQL, MySQL, ElasticSearch

Cloud & Tooling: AWS, Terraform, JFrog/Artifactory, CircleCI, Jenkins, Linux, Grafana, Git, GitHub, Jira, Figma

AI & Practices: Claude Code, Qodo, agentic AI workflows, AI-assisted TDD/code review, Agile/Scrum, CI/CD, technical documentation, code review, mentorship

EDUCATION

Computer Programming Diploma — Algonquin College

2017

Electro-Mechanical Engineering Technician (Robotics) — Algonquin College

2014