

Andre McGruder

Senior Software Engineer | Frontend Architecture, Platform Reliability, AI Tooling
Oak Park, Illinois | andremc05@gmail.com | 919-360-3765 | linkedin.com/in/andre-mcgruder | github.com/andreMc05

Professional Summary

Senior Software Engineer with 12+ years building and modernizing enterprise web, mobile, and platform systems in retail digital signage, healthcare, and federal technology. Owns production debugging and frontend architecture for a federated digital menu-board platform: React micro-frontends, Module Federation, in-store playback timing, and publication data integrity. Internal AI champion for Creative Center. Builds the instrumentation, cache discipline, and validation that keep multi-market signage deployments correct.

Skills

Frontend: React, TypeScript, Angular, JavaScript, micro-frontends, Module Federation, TanStack Query, state management, Vite, Tailwind CSS, Material UI, HTML5, CSS3, SCSS

Backend and observability: Node.js, Express, FastAPI, REST APIs, AWS Lambda, SQS, CloudWatch, RDS, S3, Docker, Grafana, SQL

Testing and CI/CD: Vitest, Jest, React Testing Library, Cypress, Azure DevOps, GitLab CI/CD, Jenkins, SonarQube, Git

AI and automation: LLM integrations, Claude AI pilot, RAG, workflow automation, internal developer tools

Other: Electron, NativeScript, HTML5 Canvas, WebRTC, IndexedDB, Auth0, Agile, SAgE

Professional Experience

Senior Software Engineer, AI Champion

Apr 2025 – Present

Coates Group — Digital Signage Platform | Remote

- Own production reliability on a federated React / TypeScript micro-frontend platform that publishes digital menu boards across thousands of retail locations.
- Designed a tag-wide state sync model across Location, Assembly, Component, and Product Category editors, with members-first virtual pagination and parallel fetches so multi-page tags save a complete assignment set and a valid PATCH payload.
- Removed a 30x structural render-loop amplification in the Combo Style editor with runtime instrumentation, stopping in-place config mutation and restoring editor responsiveness when per-size styling is on (US R40). Removed input lag on the Product Category name field.
- Eliminated one-screen rotation flicker by classifying stable versus changing sections and replacing a requestAnimationFrame poll with an event-driven rotation scheduler. Gated video playback to the visible section and re-synced clips on rotation re-entry.
- Kept Creative Center previews and bulk edits aligned with published content: invalidated Time Machine location-history and location-version caches after publish, fixed product-source matching on bulk replace, corrected large selection payloads, and added unsaved-edit leave warnings.
- Fixed restaurant-bridge store updates so an empty categoryHours payload from a fully closed store clears stale Location Timings and completes with blank dayparts.
- Modernized production observability with Grafana dashboards over AWS CloudWatch for Lambda limits, SQS lag, and RDS connections, plus CloudWatch Logs Insights queries for request IDs and error payloads in S3-backed logs.
- AI Champion for the Creative Center Claude pilot: set workflow standards for generative AI in feature delivery. Audited APAC font setups (Taiwan) and wrote backend seed automation for Europe and Australia configuration parity (Spain, Australia).

Senior Software Engineer

May 2022 – May 2024

UPMC — Healthcare Technology | Remote

- Improved enterprise Angular SPA performance by up to 80% through refactoring, lazy loading, and asset-bundle streamlining.
- Reduced NativeScript UI layout lag and memory friction for frontline healthcare users on the RxWell mobile app.
- Shipped secure patient-facing web applications under healthcare data boundaries using Angular, TypeScript, REST APIs, and Azure DevOps CI/CD in a SAgE Agile process. Role ended in a workforce reduction.

Software Engineer III

Oct 2020 – Apr 2022

Leidos | Remote

- Built .NET Core Razor and Angular applications, added JWT auth, and upgraded Angular 7 to 10 while unifying .NET and Angular layouts.

Senior Front-End Developer

Feb 2020 – Nov 2020

NITAAC (NIH) | Maryland

- Upgraded Angular 7 to 10 frontends, added Jenkins, SonarQube, and Bitbucket CI, and closed a demonstrated XSS file-upload issue.

Senior Software Engineer

Oct 2019 – Jan 2020

UnionTrack, Inc. | Maryland

- Re-architected a vanilla JavaScript app toward a single-page model and designed the REST schemas and SQL Server tables for the new data flow.

Web Developer III / Principal Web Developer

Aug 2012 – Aug 2019

Northrop Grumman — clients: CDC, NIH, DHS

- 7-year federal contractor assignment: SharePoint and custom JavaScript / .NET web platforms, cloud-migration analysis, and enterprise governance for CDC and NIH.
- CDC (5 years 6 months): assessed hundreds of SharePoint 2010 to 2013 to Online sites and reworked 300+ Nintex workflow and form elements.
- NIH and DHS R&D: authored a cloud-migration recommendations report and built an HTML5 Canvas / WebRTC image-processing UI for video identity research.

Selected Projects

AI Productivity Hub — Electron and React desktop app with Jira API and a local LLM interface to summarize tickets and speed triage.

Switchboard Simulator — Express / Node.js stand-in for the in-store media-player server. Serves exported location configs and assets on the player paths, with optional HQ fallback.

Bee Brave — 2D arcade shooter built in a holiday sprint with core browser APIs and no framework.

Markdown Knowledge Viewer / Link Logger — FastAPI plus JavaScript markdown search and export; local-first IndexedDB link index with regex search.

Education

Bachelor's Degree, Information Technology — Web Development, University of Phoenix 2008 – 2012