

Julio Aguilar

Lead Software Engineer | Platform Architecture & Developer Experience

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Professional Summary

Software engineering leader with over a decade building customer-facing applications and improving developer productivity. Progressed from Software Engineer IV to Lead Software Engineer at Autodesk, helping define a cross-team microfrontend architecture and owning 5+ microfrontends and their delivery pipelines. At EPAM, leads legacy frontend modernization and builds AI-assisted migration and review workflows. Combines hands-on implementation with architectural decisions, mentorship, and collaboration across teams.

Interested in Lead, Staff, and Principal engineering roles, as well as engineering management opportunities.

Selected impact: Average CI builds 40 to 15 minutes | Page loads 6 to 1 second | First repository migrated to Vite in one day

Professional Experience

Lead Software Engineer | EPAM Systems

Dec 2025 - Present | Client: Tideworks

- Proposed and led migration of legacy React tooling from react-scripts to Vite, reducing cold build time by approximately 60% and development-server startup time by approximately 70%.
- Migrated the first repository in one day using GitHub Copilot, codebase mapping, reusable agent skills, tests, and parallel execution of independent tasks. Followed with Material UI and TypeScript modernization.
- Refined migration skills through a small initial migration and code review; selected more capable Claude models for complex tasks and lighter models for routine edits.
- Built a VS Code extension connecting Jira acceptance criteria with feature-branch changes through Copilot agents and skills. Delivered line-specific findings and actionable recommendations, with faster PR approvals observed by the team.
- Kept the review extension focused on feedback: developers assess recommendations and apply changes; the tool does not automatically edit code or post comments.

Lead Software Engineer | Autodesk

2021 - 2025 | Promoted after joining as Software Engineer IV in Jan 2020

- Worked with team leads and principal engineers to define a microfrontend architecture using Webpack Module Federation. Owned the build, maintenance, deployment, and CI/CD pipelines for 5+ microfrontends spanning purchasing, subscriptions, permissions, and product downloads.
- Built a private npm MFE loader that let teams configure rendering without repeating integration logic, handled rendering failures gracefully, and supported lightweight communication through native browser APIs.
- Reduced average CI build time from 40 to 15 minutes (approximately 63%) and observed page-load time from 6 seconds to 1 second; used Chrome DevTools and Dynatrace to assess performance and errors.
- Enabled teams to deliver independently after shared releases had caused coordination bottlenecks. The engineering-debt backlog fell from more than 100 tickets to roughly 60 in the month following the microfrontend transition.
- Scaffolded a reusable LaunchDarkly feature-flag library and published it to Artifactory for other teams to consume during rollout.

- Wrote architecture decision records, mentored engineers, and worked through architectural decisions with team leads and principal engineers. Negotiated UX scope against architecture and delivery timelines.
- Led a separate React 18 migration after the earlier Backbone-to-React modernization.

Software Engineer IV | Autodesk

Jan 2020 - 2021 | San Francisco Bay Area

- Focused on frontend architecture and helped migrate a Backbone application to React 16 within a Lerna monorepo using Yarn workspaces.
- Moved to another team and was promoted to Lead Software Engineer after approximately one year, working on the subsequent microfrontend architecture.

Senior Software Engineer | Hertz

2017 - 2019

- Built customer-facing React experiences for a booking platform and designed frontend-to-REST API contracts.
- Expanded Cypress end-to-end coverage for critical flows and supported production incident response with CloudWatch and Splunk.

Senior Web Engineer | American Eagle Outfitters

2015 - 2017

- Designed a GraphQL data layer for e-commerce experiences and developed reusable React component patterns.
- Built Node.js services backed by Oracle and helped establish test-driven engineering practices.

Technical Skills

Architecture: Microfrontends, Webpack Module Federation, shared libraries, browser-event communication, API design, ADRs, CI/CD, feature-flag rollouts.

Frontend & tooling: React, TypeScript, JavaScript, Vite, Material UI, Node.js, GraphQL, npm, LaunchDarkly, Artifactory, Chrome DevTools, Dynatrace.

AI-assisted engineering: GitHub Copilot, reusable agent skills, task decomposition, dependency-aware parallel execution, model selection, and developer review tooling.

Projects and Publications

groupjs_by: Published JavaScript grouping and aggregation library, with a focus on API design, testing, and package distribution. Source code | Engineering article.

Certifications

Claude Certified Architect - Foundations | Anthropic

Expires May 23, 2027

Certified Partner Specialist Gemini Enterprise Agent Development | Google Cloud

Expires Jan 13, 2027

credly.com/users/julio-aguilar.7cbe6605/badges/credly