MOHAMMED ASHRAF

Full-Stack Engineer · Analytics & Dashboard Platforms · Java, Vue · LLM Agents & MCP Tooling

+91 86681 69082 · mohammed.tue@gmail.com · linkedin.com/in/mohammed-ashraf-ba0a11133
Chennai, India · Open to relocation

PROFILE

Full-stack engineer with 4+ years of end-to-end ownership of the analytics domain of Facilio, a multi-region B2B SaaS platform for building operations. Primary author of the dashboard product, the company-wide charting library and design system, and the Java analytics and dashboard APIs behind them; more recently the LLM copilot, agent workflows and MCP tooling that generate dashboards conversationally. Comfortable across Java, Vue, React, TypeScript and Python, and used to being the person who designs the architecture, reviews the pull requests, ships the release and fixes it in production. Bias toward measurable engineering: an ~85% production bundle cut, independently deployable micro frontends, and versioned internal packages consumed by every Facilio app. Prior engineering exposure in Riyadh, Saudi Arabia (ABB).

CORE SKILLS

BACKEND	Java (Struts command-chain architecture, REST/JSON APIs, CRUD and export services, permission and security configuration), MySQL, Python services, Node.js/Express
AI & AGENTS	LLM agent workflows, tool calling, MCP servers and connectors (Python), Agno orchestration, SSE streaming of agent output, intent classification, system-instruction libraries with guardrails, WebMCP browser tools
FRONTEND	Vue 2 (Pinia, Vue Router), React 19, TypeScript, Stencil web components, micro frontends, Webpack/Rollup/Vite build tuning, npm package design and semantic versioning, i18n (Tolgee)
DATA VIZ	Apache ECharts 5, D3, gridstack layouts, Bryntum SchedulerPro, Puppeteer-based PDF rendering
DELIVERY	Bitbucket Pipelines, AWS CodeBuild, multi-region deployment configuration, private npm registry, code review, cross-team API contracts

EXPERIENCE

Member of Technical Staff · Engineering Lead, Analytics & AI

Jun 2022 – Present

Facilio · Data-driven Building Operations (B2B SaaS) — *Chennai, India*

Technical owner of the analytics domain end to end: Java APIs, frontend product, visualisation and UI libraries, and the AI layer on top. Primary contributor to the dashboard, charting, design-system and criteria-builder codebases, and the main reviewer of pull requests into the dashboard codebase.

Dashboards & Analytics Platform

2023 – present

- **Built the dashboard product from scratch** as a standalone Vue 2 micro frontend: grid layouts, tabs and grouping, KPI/card widgets, module and pivot reports, live module reports, drilldown filters, timelines, sharing and permission scoping, app-scoped dashboards and translations.
- **Micro frontend architecture.** Split dashboards and reporting out of the monolithic client into an independently built and deployed module with an embed bridge, shrinking the host bundle and decoupling release cadence.
- **Java analytics and dashboard APIs.** Designed and implemented the analytics and dashboard API layers in the core Java server: report data, folder CRUD, widget lifecycle, report/pivot/dashboard export with signed URLs, permission definitions and API route configuration.
- **Performance.** Cut the production JavaScript bundle from ~1 MB to ~150 KB through Webpack tuning, lazy loading of grid widgets and dependency pruning.

AI: Dashboard Agents, Widget Copilot & MCP

Nov 2025 – present

- **Widget Copilot.** Built a conversational copilot that creates and edits dashboard widgets: Java agent workflow (intent identification, module-selector guardrails, widget generation, summary), token-by-token SSE streaming to the client, chat history persistence, and a Vue chat UI with partial-JSON rendering.
- **Dashboard generation agents.** LLM agents that generate whole dashboards and widgets (cards, gauges, charts, list views, narratives, images) from natural-language prompts, with prompt editing, thumbnails and AI licensing controls.
- **Prompt engineering at scale.** Authored and maintain the agents' system-instruction library plus a reference corpus the agents ground on: internal query language, layout grammar, widget-edit guides and a facilities-management language map.
- **MCP tooling.** Wrote the Python MCP server and connectors exposing dashboard and report capabilities (widget creation, data fetch, signed-URL exports) as tools; propagated per-user service tokens through MCP tool calls so agents act with the caller's permissions.

- **Agno orchestration.** Implemented dashboard agent functions in the Python AI service (Agno integration, widget router, intent identifier, prompt builders, copilot tools) that the Java backend calls for multi-step workflows.
- **WebMCP in the browser.** Scaffolded a WebMCP tool registry with an iframe bridge and discovery/navigation tools so in-page agents can drive the main client.

Identity, Home Launcher & SDK

Sep 2026

- **Identity service.** Added the Home API to the Java identity service: RBAC-backed, user-scoped app catalog, CORS filter, server-to-server client to the core app, and platform-app launch URL resolution; rolled out service-registry and system-apps configuration across all deployment regions.
- **Home launcher app.** Built the React 19 + Vite launcher: app catalog with per-app roles, profile, org switching, authenticator setup and confirmed destructive account actions; handled cross-site cookie and regional CORS constraints.
- **App-launcher SDK.** Designed a five-package SDK: headless TypeScript core, a Stencil web component, auto-generated React and hand-written Vue 2.7 bindings, and a React Native switcher, published to npm via CodeBuild CI and adopted by host apps within a week.

PPM Calendar

Aug 2025 – Feb 2026

- **Planned-maintenance scheduling.** Delivered the PPM calendar end to end: Java backend (folder and PPM CRUD, criteria, pagination, dynamic KPIs, rescheduling), Vue + Bryntum SchedulerPro frontend, and PDF export through the Puppeteer PDF service (timeout handling, isolated browser contexts). Fixed a series of multi-timezone rendering defects reported from production.

Shared Libraries: Charts, Design System, Criteria, Icons

2022 – present

- **Charting library.** Designed the charting library from scratch on Apache ECharts 5, now the visualisation layer for every Facilio app and the generation target for the AI agents: bar, spline, pie, gauge, treemap, heatmap, telemetry-map and baseline charts, drilldowns, colour palettes, dark theme, unit and decimal formatting, timezone and DST handling; shipped as a versioned package with regular releases.
- **Design system.** Co-maintainer of the component library: reading and dashboard cards, page header, cascader, accordion, steps, modals, gridstack sub-grids, and the default theme tokens.
- **Criteria builder and forms.** Maintained the filter/criteria builder package across two major versions with a beta-then-stable release flow, and contributed to the shared forms package.
- **Icon system.** Own the SVG icon pipeline and categorised icon set, the internal docs site with icon search and deprecation, animated icons, and publishing to the private registry.

EARLY CAREER

Software Engineer Intern · Gofrugal — Jan 2020 · Chennai

Machine Learning Data Associate · Amazon · training-data preparation and quality control — Jul – Oct 2019 · Chennai

Engineering Trainee · ABB · Electrical Products & Distribution Solutions — Feb – Apr 2019 · Riyadh, Saudi Arabia

Intern · ABB · power system studies of industrial networks — Nov 2017 – Feb 2018 · Chennai

EDUCATION

Bachelor of Engineering, Electrical and Electronics Engineering — 2014 – 2018

Anna University — *Chennai, India*