

Ashwin Chembu

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PROFILE

Full-stack engineer building applied-AI products, secure integrations, and data workflows with React, Python, and Node.js. Combines product implementation with testing and stakeholder delivery.

TECHNICAL SKILLS

Languages / Product: Python, TypeScript, JavaScript, SQL, React, Next.js, Tailwind CSS

Services / Data: FastAPI, Node.js, Express, MongoDB, Snowflake, AWS S3, Firebase

AI / Quality: RAG, LangChain, FAISS, vector search, pytest, Vitest, Playwright

EXPERIENCE

Business Technology Solutions Associate | ZS Associates

South San Francisco, CA | Jun 2024-Present

- Built **React/FastAPI** RAG assistants with AWS document ingestion and Redis-backed services, connecting uploaded knowledge to searchable enterprise workflows so teams could retrieve context through usable product interfaces.
- Developed Snowflake SQL pipelines across **327K+** healthcare records, combining identifier matching, specialty joins, address comparison, and API connectivity to produce traceable extracts and quality-control reports for review.
- Built a **Node.js** provider-lookup workbench with exact identifier search, Jaro-Winkler address ranking, bulk uploads, and session-bound exports; validated authentication, isolation, input checks, and export safety with **10** local tests.
- Implemented **React/JavaScript** account-plan submission and manager approval with CRM-backed data services, timestamps, review history, and confirmation paths, simplifying field-user actions while preserving review traceability.
- Translated ambiguous healthcare stakeholder needs into testable rules, API integrations, and source-to-target mappings, documenting acceptance criteria and unresolved decisions so delivery teams could implement scoped changes.

Founder and Lead Developer | Tallyrus

Jun 2023-Sep 2025

- Integrated LangChain/OpenAI embeddings with NumPy normalization and FAISS similarity search, combining retrieved historical essays with teacher rubrics and prompts in GPT-4o requests to return contextual feedback for educator review.
- Designed **React** rubric and essay-review interfaces that connect teacher materials to generated feedback, incorporating educator testing and iteration so users could inspect writing quality while retaining consistent scoring logic.
- Integrated **React/TypeScript** and Express product workflows with Google OAuth, protected routes, **MongoDB** persistence, and secure sessions, connecting authenticated educator access to document and essay-feedback operations.
- Connected Express/Multer upload routes for teacher files, rubrics, and historical essays to AWS S3 storage and **MongoDB** assignment records, making educator materials available to downstream grading and review workflows.
- Led product planning, educator testing, and iterative development for the collaborative essay-feedback platform, translating user feedback into rubric and review workflows and raising **five figures** to fund product development.

Data Analyst / Web Development Lead | Tech4Good at UCSC

Mar 2023-Jun 2025

- Built TypeScript/Figma API chat, text-entry, polling, and Excel/XLSX export workflows in a collaborator-owned FigJam repository, enabling research and classroom teams to collect, discuss, and export structured participant responses.
- Implemented **20+** attributed Node/Express REST routes with **MongoDB** persistence and logging for chat, text-entry, and polling workflows, supporting threaded messages, anonymous responses, editing, voting, and admin controls.
- Analyzed **43,340** anonymized interaction rows across **2,805** sessions with **Python/Pandas**, calculating group active-time measures and building Excel/XLSX exports to turn collaboration records into structured research evidence.
- Built Power BI and Tableau research dashboards alongside **Python**, R, and SQL analysis, translating findings into visual summaries for multidisciplinary stakeholders while keeping research interpretation connected to supporting data.

PROJECTS

Sylk | Multi-Tenant Supply-Chain Platform

Private organization product | 2025-Present

- Built **React** 19/TypeScript supply-chain workflows with Firebase for organization onboarding, line-item shipments, fulfillment, files, and real-time chat, connecting retailer and manufacturer roles through a shared operational product.
- Enforced organization isolation and role permissions through Firestore and Storage rules, separating retailer-only financial data from shared manufacturing workflows and using Cloud Functions to validate fulfillment transitions.
- Tested tenant access, reusable components, and complete supply-chain journeys with Vitest, **React** Testing Library, Firebase emulators, and Playwright, checking permission boundaries alongside onboarding and shipment workflows.

Lume | AI Meeting Intelligence

Dec 2025-Jan 2026

- Built a **React** and Node/Express meeting-intelligence platform with **MongoDB** records and AWS S3 file storage, connecting meeting capture, uploaded documents, transcript-aware search, and project questions in one reusable workflow.
- Designed a RAG engine with vector retrieval, intent routing, evidence extraction, and generator/critic refinement, combining relevant meeting and file context into citation-backed answers that users can trace to supporting sources.
- Built reusable Project Brain knowledge bases from transcripts and seed files, retaining project terminology, relationships, and contextual evidence so later questions could reuse accumulated knowledge across meetings and documents.

Private Filedrop | Secure File Exchange

Jun 2026-Aug 2026

- Built password-protected browser uploads and API-key-protected Express APIs with OpenAPI documentation, organizing files by metadata, tags, project paths, and version history so devices and AI clients could exchange artifacts securely.
- Added local and S3-compatible storage drivers with migration tooling that preserves file bytes and metadata, retaining rollback sources and unguessable download links to support durable, versioned handoffs across computers.
- Exposed MCP tools for listing, uploading, organizing, and retrieving files, with HMAC-SHA256 webhooks and timing-safe credential checks; added deduplicated jobs, atomic claims, renewable leases, and retry limits for cross-device coordination.

EDUCATION

University of California, Davis | B.S. Computer Science | GPA: 3.7

Davis, CA | Graduated Jun 2025

LINKS

Portfolio: <https://ashchembu.com> | LinkedIn: [linkedin.com/in/ashwin-chembu-a5292b205](https://www.linkedin.com/in/ashwin-chembu-a5292b205) | GitHub: github.com/ashwinchembu