

MANALI KASWA

PRODUCT ENGINEER · BACKEND & CLOUD PLATFORMS

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SUMMARY

Product engineer with 5+ years turning requirements into distributed cloud systems that ship. I own features end-to-end — from customer discovery and design through QA and release — pairing hands-on engineering with product thinking. Passionate about products that are simple, reliable, and delightful.

CORE COMPETENCIES

Product & Delivery: Requirements analysis, Roadmap & release planning, Stakeholder management, Cross-functional collaboration, Mentoring, Specification writing, Presentation, Research & analysis.

Engineering: Golang, Python, Microservices, REST API design, NoSQL DB design, Event-driven architecture, MCP server, Test-driven development

Cloud & Infrastructure: AWS (Lambda, ECS, EC2, Load balancers, CDK, SQS, SNS, IoT, DynamoDB, S3, OpenSearch, IAM, Cognito), Docker, Jenkins, CI/CD

Identity & Security: OAuth 2.0, OIDC, Admin operations management, RBAC, MFA, GDPR compliance

Domains: Cloud platforms, FinOps & Cost optimization, IoT, Scalability monitoring

AI: Automating workflows using MCP, Skills and Claude

EXPERIENCE

Espressif Systems

Senior Engineer — Product & Backend, IoT Cloud Platform

Pune, India
Dec 2025 – Present

Tech Stack: Golang, Python, AWS, CDK

- **Own product direction and software architecture for a new IoT cloud platform** built from the ground up, translating early customer needs into shipped features.
- **Drive release planning and production rollouts**, sustaining a reliable weekly delivery cadence across the team.
- **Own the end-to-end customer experience**, turning raw requirements into design, reports, metrics, delivery, and support.
- **Mentored 2 interns** to independently ship a user-system connector and a deployment manager.

Cloud Backend Engineer, ESP RainMaker

Feb 2023 – Dec 2025

Tech Stack: Golang, AWS (ECS, OpenSearch), AWS China (Sinnet/NWCD partition)

- **Led the end-to-end launch in the AWS China region — a new market**, including project management, app-store distribution, third-party push notifications, WeChat Sign-In integration.
- **Built an OAuth 2.0 identity server and client ground up** implementing all major grant flows, JWK, JWT architecture and admin configuration.
- Designed an **analytics dashboard** leveraging OpenSearch with metrics for user and device operations and timeseries data.
- Delivered a feature/service/client-based **FinOps framework** manually reviewing 250K+ lines of code pre-AI era. The dashboard informed several product cost decisions. Optimized multiple workflows like the OTA status flow achieving **~99% cost reduction**. **Mentored 3 interns** on developing a FinOps calculator project.
- Key contributor to the **4M-device scalability** test, leading cost analysis, observability dashboards, and performance investigations. Added concurrent batch processing to SQS event pipelines.

Associate Engineer, ESP RainMaker

May 2021 – Mar 2023

Tech Stack: Golang, AWS, REST APIs, MQTT, CI/CD (Docker, Jenkins, GitLab CI)

- **DevOps:** Automated end-to-end operations, which were previously manual, across 10+ CI/CD pipelines.
- **Shipped core product features and developer tooling** like JSON data processor, synchronous mTLS-based APIs for IoT devices, dynamic device grouping.
- **Led end-to-end user migration for 5+ enterprise customers** across backend, apps, dashboards, CLI, and integrations.

- **Delivered security & compliance features:** SMS-based MFA, DB backup and restore, GDPR PI encryption with two-level caching, and API logging to S3.
- Revamped company-wide AWS account management using SSO-based access over password and identity governance.
- **Owned release notes and technical docs.**
- **Collaboration:** Reviewed **90% of team's code**; Mentoring junior engineers.

EDUCATION

International Institute of Information Technology, Pune

Pune, India

B.E. in Computer Engineering — CGPA 9.73/10.0

2017 – 2021

- Relevant Coursework: Data Structures & Algorithms, Database management, Operating Systems, Computer Networks, Object oriented programming.
- **Academic Project: COVID-19 Workforce Cross-Platform App:** a Thane Municipal Corporation — sponsored patient-lifecycle app with GPS ambulance/patient tracking, hospital bed management, and a stakeholder statistics dashboard. Won NES Innovation award - Most commendable project.
- **Publication:** "A COVID-19 Tracker for Medical Front-Liners," in Artificial Intelligence Applications for Health Care, Routledge (Taylor & Francis), Ch. 13, Apr 2022.

HONORS, RECOGNITION & CERTIFICATIONS

- **ESP Maverick Quarterly Award, Spot Award, and 'Openness' Value Award** — Espressif Systems.
- **B.E. Topper and two-time University Rank Holder;** Award for Overall Academic Achievement, I²IT Pune.
- **PCMC Smart City Hackathon Finalist** (HealthConnect); **Top 6%** — Infosys HackWithInfy.
- **Speaker:** "Building OAuth from First Principles," MiniOrange IdentityShield Summit '25; ESP DevCon '22.
- **Certification:** AWS Certified Developer – Associate (2022).