

Akhil Mohandas

Product Engineer — UI/UX-Driven SaaS & AI Products

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PROFESSIONAL SUMMARY

Product Engineer with 2+ years building AI-enabled SaaS products end-to-end — from client discovery and UX design to LLM integration, backend services, and AWS deployment. First engineering hire at AiVanta, owning four production systems across insurance, construction, and enterprise sectors. Experienced in compliance-aware architecture (SOC 2 Type II), human-in-the-loop AI workflows, and cost-optimised infrastructure.

EXPERIENCE

Product Engineer

Feb 2024 – Present

AiVANTA

Mumbai

- Design: Led client discovery, defined product requirements, and designed UX workflows and frontend architecture across multiple SaaS products and web platforms.
- Develop: Built full-stack applications using React, FastAPI, and PostgreSQL including authentication, RBAC systems, and LLM integrations.
- Deploy: Managed production deployment on AWS (EC2, Fargate), Vercel, Netlify, implemented CI/CD pipelines, and optimized infrastructure cost and performance.
- Achieved Lighthouse scores of 95+ across performance, accessibility, SEO, and best practices.
- Worked with external compliance auditors on SOC 2 Type II readiness, resolving code and cloud security vulnerabilities.

UI/UX Designer

Dec 2023 – Feb 2024

Xee Design

On-site, Navi Mumbai

- Designed UI screens and visual interfaces for client projects using Figma, focusing on clean layouts, consistency, and brand alignment.
- Created Behance case studies and portfolio showcases to present design work effectively and support company marketing efforts.
- Produced graphic design assets and visual materials beyond UI, contributing to brand communication and project presentation.

PROJECTS

Products

AI Insurance Document Automation Platform | *ReactJS, FastAPI, MySQL, OpenAI, AWS*

- Sole owner of **AI Document Maker** built for **Canara HSBC**; led discovery sessions, defined product scope, designed UX workflows, and built the React frontend, FastAPI backend, and LLM integrations.
- Engineered a schema-aware LLM pipeline that identifies relevant database fields from the full DB schema, retrieves values, and dynamically rewrites insurance document sections.
- Designed structured human-in-the-loop review workflows ensuring AI-generated content remained auditable and compliance-ready.
- Conducted direct client discussions with insurance stakeholders, translating operational requirements into a production-ready product.

Enterprise Intelligent System | *ReactJS, FastAPI, PostgreSQL, AWS*

- Engineered two interconnected systems — **ConcreteGPT** (RAG-based internal knowledge assistant) and **ConcreteEIS** (role-gated enterprise dashboard) for **AJAX Engineering**.
- Built the full application stack including React frontend, FastAPI backend, PostgreSQL database, authentication systems, database triggers, and RBAC-based access control.
- Defined enterprise access tiers and data visibility rules with AJAX stakeholders, translating security and compliance requirements into a working RBAC architecture.
- Implemented CI/CD pipelines and deployed both systems on AWS EC2 infrastructure.

Kiosk based Product Recommendation System | *ReactJS, PWA, TailwindCSS, Figma*

- Designed and built **AJAX SmartAssist**, a kiosk-based Progressive Web Application showcased at **Excon Bengaluru** for interactive construction machine discovery.
- Captured user inputs and dynamically recommended appropriate AJAX machine models using video demonstrations and structured product metadata.
- Owned end-to-end product design and frontend development, including UX flows optimised for large touch-screen environments used in industry exhibitions.

Web Applications

Corporate SaaS Platform Website | *NextJS, TailwindCSS, Figma, Vercel*

- Engineered the official **aivanta.ai** platform website with a performance-optimised multi-page architecture and strong SEO focus.
- Achieved Lighthouse scores of 95+ across performance, accessibility, SEO, and best practices.
- Introduced AWS Fargate-based optimisation reducing infrastructure costs by up to 90% compared to traditional EC2 deployments.
- Owned the project lifecycle from UX design and frontend implementation through deployment.

Marketing Website Platform | *ReactJS, TailwindCSS, Framer Motion, Netlify*

- Designed and developed the **aivantalabs.ae** marketing website with a component-based frontend architecture.
- Focused on clean visuals, motion-driven UI, and responsive layouts across desktop and mobile devices.
- Improved performance, accessibility, and maintainability through modular component design.

SECURITY & COMPLIANCE ARCHITECTURE

- Collaborated with external auditors on **SOC 2 Type II readiness**, identifying and remediating vulnerabilities across application code, cloud infrastructure, and access policies.
- Implemented AWS security controls including **GuardDuty monitoring, WAF protection, IAM policy enforcement, and centralized secrets management** to strengthen platform security posture.
- Architected **multi-account AWS environments and VPC segmentation**, isolating public access layers from internal processing workloads and enforcing least-privilege network boundaries.
- Improved **Cloud Security Posture Management (CSPM) scores** by implementing infrastructure guardrails and security configuration checks using **Terraform-managed infrastructure**.

TECHNICAL SKILLS

Frontend: React.js, Next.js, JavaScript, TailwindCSS, HTML, CSS

Backend: FastAPI, Python, REST APIs

Database: PostgreSQL, MySQL

Cloud & DevOps: AWS, CI/CD, Vercel, Netlify

Design & Product: Figma, Wireframing, Prototyping, UX Workflows

EDUCATION

Pillai College of Engineering

Bachelor of Technology (Information Technology)

Panvel, Navi Mumbai

Mar 2020 – May 2024