

# SHASHANK SHEKHAR

## AI-INTEGRATED PRODUCT ENGINEER | SCALABLE SYSTEMS & END-TO-END SAAS DELIVERY

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[LinkedIn](#) | [Github](#) | [Portfolio](#)

### PROFESSIONAL SUMMARY

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Product-oriented Software Engineer with 8+ years of experience designing and delivering scalable systems from concept to production. Experienced in high-scale search-driven platforms (7.7M+ SKUs), ML-assisted workflows, and AI-integrated services.

Operate independently across architecture design, implementation, deployment, and production support. Focused on building reliable, extensible systems with practical AI integration.

### WHAT I BRING TO AI-FIRST PRODUCT TEAMS

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- Translate ambiguous business problems into executable technical architecture
- Design scalable systems across UI, APIs, search, data modeling, and deployment
- Integrate AI responsibly (validation layers, fallback logic, cost/latency awareness)
- Take ownership from planning through production support

### PROFESSIONAL EXPERIENCE

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#### CrowdAnalytix – Software Engineer II (Product Systems)

Aug 2019 – Present | Bengaluru, India

Designed and delivered scalable enterprise systems supporting large-scale catalog and taxonomy platforms.

##### High-Scale Product Discovery Platform

- Built search-driven product system supporting 7.7M+ SKUs
- Implemented millisecond-level faceted search using Typesense
- Designed schema-driven product views and bulk-edit workflows
- Optimized performance for large datasets

##### Taxonomy & Classification Management System

- Built hierarchical category management and attribute governance tools
- Integrated ML classification predictions into operational dashboards
- Reduced manual analyst effort through workflow improvements

##### System Modernization & Tooling

- Re-architected legacy UI systems into modular, reusable component structures
- Built reusable SVG tooling (zoom/pan/coordinate export) used across internal tools
- Established Docker-based CI/CD pipelines with GitLab Runner
- Automated build and deployment pipelines to AWS and GCP environments

**Environment:** Angular, TypeScript, Typesense, FastAPI, Docker, GitLab CI/CD, AWS, GCP

#### Freelance Developer

Jul 2017 – Jul 2019 | Remote

- Delivered 15+ web applications end-to-end
- Managed AWS EC2 deployments and production maintenance
- Owned planning, client communication, delivery, and fixes

### INDEPENDENT SYSTEMS & APPLIED ENGINEERING

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#### AI-Powered Workflow Builder Platform (Deployment-Ready)

Designed and implemented a workflow automation platform enabling visual design, AI-assisted generation, and governance of operational workflows.

- Graph-based drag-and-drop workflow editor (node/edge modeling)
- AI-assisted workflow generation (natural language → structured workflow graph)
- Workflow versioning, JSON import/export, template reuse
- Authentication (access + refresh tokens), user management, audit logging
- FastAPI backend with Alembic migrations and Dockerized deployment
- Architected clear separation between workflow definition and execution layers to enable extensibility and controlled execution

## AI-Integrated Automation Services

- Built FastAPI services integrating LLM APIs for structured extraction (PDF/Text → JSON)
- Implemented schema validation and deterministic post-processing layers
- Evaluated cost, latency, and fallback strategies for AI workflows
- Deployed self-hosted LLM models (Ollama) to evaluate privacy, latency, and cost tradeoffs

## Ongoing Systems Work

### Data Transformation Adapter (In Progress)

- Schema-driven transformation engine mapping arbitrary CSV/JSON inputs into structured templates
- Validation and export pipelines (JSON/CSV)

### LayerOne Design System (In Progress)

- Framework-agnostic design system compatible with Angular and Next.js
- Scalable component architecture with theme tokens

## AI-Native Engineering Practices

- Structured projects with machine-readable architectural context to accelerate AI-assisted development
- Maintained technical and management documentation alongside code for clarity and onboarding efficiency
- Designed workflows assuming AI collaboration while retaining deterministic validation and review processes

## TECHNICAL FOCUS

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### System Design & Architecture

Search-driven systems, workflow modeling, schema design, API contracts

### Frontend

Angular, TypeScript, React component architecture

### Backend & APIs

FastAPI (Python), REST APIs, LLM integration

### Infrastructure

Docker, CI/CD (GitLab), AWS, GCP, Linux

## EDUCATION

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**MCA** – BBAU University, Lucknow | 2014 – 2017

**B.Sc. IT** – Amity University, Lucknow | 2011 – 2014

## CERTIFICATIONS

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- Architecting with Google Kubernetes Engine: Foundations – Oct 2021
- Google Cloud Fundamentals: Core Infrastructure – Sep 2021
- Getting Started With Docker – Jan 2019