

DUSHYANT SINGH RATHORE

Engineering Manager | Product & Platform Engineering | AI/ML Systems

Bengaluru, India | +91 8007383745 | dushyant.singhrathore42@gmail.com
linkedin.com/in/dushyantsr | github.com/dushyantgithub | dushyantrathore.com

SUMMARY

Engineering Manager with 10+ years in software engineering and 6+ years leading product engineering teams, currently building an AI-driven media platform used by Viacom18, Zee, Jio, Sony, Garena and BARC. Grew Tessact's engineering organisation from 2 to 10 engineers while remaining hands-on across a Django/DRF backend and a Next.js/TypeScript frontend. Owns delivery end to end: architecture, roadmap, hiring, client escalations, production incident response and cloud cost, including a 53% cut in monthly AWS spend. Ships AI/ML to production across video understanding, speech-to-text, LLM pipelines, generative avatars and automated short-form video.

CORE SKILLS

Engineering Leadership: Team Building, Technical Hiring & Interviewing, Mentoring & Coaching, Performance Management, Agile & Scrum, Sprint Planning, Roadmapping, Delivery Management, Stakeholder Management, Cross-Functional Leadership, Incident Management, Budgeting & Cost Estimation, Client Engagement & Pre-Sales

Languages: Python, TypeScript, JavaScript, SQL, Swift, C++, Bash

Backend & Architecture: Django, Django REST Framework, FastAPI, Celery, Microservices, Distributed Task Queues, WebSockets, JWT, System Design

Frontend: React, Next.js (App Router), React Native, TypeScript, TanStack Query, Zustand, Tailwind CSS, Remotion, Liveblocks, Angular, Electron, Qt/QML

AI & Machine Learning: LLM Integration (Anthropic Claude, NVIDIA NIM, Vertex AI), AI Agents, Speech-to-Text (Whisper, faster-whisper, Google STT), Text-to-Speech (ElevenLabs, Magpie), Computer Vision (OpenCV, YOLO), PyTorch, Voice Activity Detection, Semantic Search, Prompt Engineering, MLOps

Cloud & DevOps: Google Cloud Platform, AWS, Docker, GitHub Actions, CI/CD, Sentry, Cloudflare

Product: Pricing & Packaging, Usage-Based Billing, Subscription Monetisation, Requirement Analysis, SOW & Scope Definition, PoC Delivery, Product Lifecycle Management, Product Analytics

PROFESSIONAL EXPERIENCE

Tessact

Engineering Manager

Bengaluru, India
2019 - Present

Promoted from Senior Software Developer

- Scaled the engineering organisation from 2 to 10 engineers, owning technical hiring, interviewing, onboarding, mentoring and performance conversations while keeping enterprise delivery uninterrupted for Viacom18, Zee, Jio, Sony, Garena and BARC.
- Lead a cross-functional team of engineers and designers spanning backend, frontend, AI and product design, running sprint planning, Agile/Scrum ceremonies, code review standards and release management.
- Designed and launched the monetisation layer, comprising five subscription tiers from \$19 to \$999/month, a usage-based credit system, entitlement enforcement and billing, converting a services-led product into a self-serve SaaS offering.
- Moved all long-running media work (FFmpeg transcoding, scene detection, voice activity detection, transcription and LLM calls) off the request path onto Celery and RabbitMQ workers backed by PostgreSQL, Redis and Elasticsearch, holding API response times fast under heavy processing load across a multi-tenant, Kubernetes-deployed platform.
- Directed the Next.js, React and TypeScript web application, delivering AI Shorts, AI Avatars, AI Repurpose, AI Marketing and AI Search modules plus a Remotion-based collaborative video editor with real-time presence over Liveblocks and Centrifugo.
- Integrated production AI/ML pipelines across Google Vertex AI, Cloud Speech-to-Text, Anthropic Claude, ElevenLabs, Silero VAD, PyTorch, OpenCV and YOLO, powering automated tagging, compliance detection, talking avatars and short-form video generation.
- Own production incident response for every major client account, triaging escalations end to end, driving root-cause analysis and communicating resolution status directly to client stakeholders.
- Cut the monthly AWS bill from \$15K to \$7K, a 53% reduction worth roughly \$96K annually, by leading workload profiling, container right-sizing and a move to CPU-only inference builds that removed about 5 GB of unused CUDA dependencies from every image.
- Run client-facing technical discovery, PoC scoping, SOWs and effort estimation, converting enterprise requirements into funded, scheduled roadmap items.
- Standardised engineering practice through documented architecture rules, pre-commit hooks and mandatory review gates.

Clap Global

Mumbai, India

Senior Software Developer

2017 - 2019

- Led a 10-person engineering team building client web applications on Angular and PHP, owning sprint planning, code review standards, release cadence and technical decision-making.
- Mentored and upskilled developers on Angular component architecture, TypeScript and modern PHP practices, cutting ramp-up time for new joiners and raising baseline code quality across the team.
- Translated ambiguous client requirements into technical specifications, project roadmaps and delivery milestones across concurrent engagements.
- Estimated project costs and managed budgets, resource allocation and task delegation, protecting delivery margin while meeting committed dates.
- Refactored legacy PHP codebases into modular, reusable components, reducing regression defects and accelerating feature turnaround.

Impact Automation

Boston, MA (Remote)

Software Developer II

2016 - 2017

- Built *Mystro*, a ride-management application for rideshare drivers, independently from concept to production, owning architecture, API design, front-end implementation and deployment.
- Designed the complete application architecture, including modular front-end structure and REST API contracts, for maintainability and scale.
- Authored and open-sourced reusable React UI component libraries, improving front-end delivery speed for internal teams and the wider developer community.
- Refactored large legacy codebases for readability, consistency and reuse, delivering measurable reductions in development time and defect count across releases.

ClayPlay

New Delhi, India

Software Developer I

May 2016 - Oct 2016

- Developed end-to-end product pipelines and owned UI/UX implementation and front-end development for the consumer web platform.
- Built interactive features and motion design that improved engagement and perceived performance across the site.

INNOVATION INITIATIVES

Vokrr: Local-First Smart Home Console & Hardware

vokrr.com | github.com/dushyantgithub/Vokrr

- Architected a privacy-first smart home platform running entirely on-device on a Raspberry Pi 4B, combining a FastAPI backend, native Qt 6/QML touchscreen kiosk, Home Assistant device integration and an iOS client, orchestrated with Docker Compose and systemd.
- Built an offline voice pipeline combining Porcupine wake-word detection, faster-whisper STT, NVIDIA-hosted Llama intent classification and Magpie TTS, executing Home Assistant service calls locally without cloud round-trips.
- Implemented JWT access/refresh authentication, a device registry kept in sync over Home Assistant REST and WebSocket streams, Spotify OAuth playback control and optional Cloudflare Tunnel exposure for the backend only.
- Productising the Vokrr Series One hardware line (Knob, Watch and Panel) from industrial design through firmware, backend and companion applications.

Noti: AI Notification Wearable

github.com/dushyantgithub/Noti

- Designed and built a Bluetooth Low Energy display pendant on a Seeed XIAO nRF52840 Sense with a 1.28-inch round touch display, delivering glanceable calendar, health, weather and AI-agent updates from an iPhone.
- Implemented a Nordic UART BLE protocol with delimited records, validation, acknowledgements and last-known-value retention, alongside a five-screen touch UI with gesture navigation and inactivity power management.
- Built the companion iOS application (Swift, EventKit, HealthKit, Open-Meteo) and a local relay surfacing live Codex and Claude Code agent status across multiple authenticated accounts.

Simply Home: Home Assistant Kiosk & Dashboard (Open Source)

github.com/dushyantgithub/simply-home

- Built an Electron kiosk for Linux and Raspberry Pi touch panels with persistent display rotation, power and brightness control, MQTT discovery and system telemetry across CPU, memory, temperature, network and uptime.
- Developed a responsive custom Home Assistant dashboard card that adapts from portrait wall panels to landscape displays, with device, security, weather, people-map and SpotifyPlus media controls.
- Automated multi-architecture releases (Debian arm64 and x64 packages plus portable builds) through GitHub Actions, with a one-line installer that provisions a systemd user service.

EDUCATION

Symbiosis University, Bachelor of Computer Applications | 2012 - 2015

Languages: English (Fluent), Hindi (Fluent), French (Intermediate)