Sourav Dey

Product Engineer · Full Stack + AI

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PROFESSIONAL SUMMARY

Product Engineer with **8+ years** of building products from 0 to 1, from freelance clients to Head of Engineering at Alphastreet.ai, owning high-traffic products serving **millions of users** from idea to production. Production experience shipping LLM and agentic AI systems (GPT, Claude, MCP) to customers, with deep expertise in React.js, Next.js, TypeScript, and Python. 6 years fully remote; async-first with US-hours overlap.

SKILLS

AI & LLMs	LLM Integration (OpenAI GPT, Anthropic Claude APIs), Multi-Agent Systems & Multi-Step Workflows, MCP, RAG, Prompt Engineering, Tool Calling, Structured Outputs, Human-in-the-Loop Review
Languages	TypeScript, JavaScript (ES6+), Python, HTML5, CSS3/SCSS, Java
Frontend	React.js, Next.js, Redux, TanStack Query, Tailwind CSS, React Native, Web Performance Optimization, Core Web Vitals, Storybook.js, Responsive Design, Web Accessibility (WCAG/A11y)
Backend & Data	Node.js, Express.js, FastAPI, REST APIs, GraphQL, PostgreSQL (Supabase), Firebase/Firestore, MongoDB, SQL, Serverless Architecture (GCP)
DevOps & AI Tools	AWS (ECS Fargate, SES, CloudWatch), Terraform, Docker, GitHub Actions, CI/CD, Vercel, GCP, Webpack, Vite, New Relic, FullStory, Claude Code, Cursor, GitHub Copilot
Practices	Product Engineering, System Design, Distributed Systems, Micro-Frontend Architecture, Technical Leadership, Workflow Automation, Agile/Scrum

PROFESSIONAL EXPERIENCE

Alphastreet.ai / Head of Engineering — Sep 2026 – Present · Remote

A product of OpenGrowth Ventures, the venture studio

- **New Web App & API (0-to-1):** Shipped the web app and API to beta within **2 months** (React, TypeScript, Python, PostgreSQL, Claude), cutting first-load size by **83%** and covering the API with **1,221 tests**.
- **Predictive AI Simulation at 10x Scale:** Migrated the 10-agent simulation from a single EC2 server to ECS Fargate, scaling nightly coverage from 60 to **600 companies** in ~75 minutes while cutting compute cost by **5x**.
- **Trustworthy Runs:** Runs with failed LLM calls are never published, results moved from 8–80 MB JSON files to PostgreSQL, and missed nights alert the team the same morning.
- **Beta-Ready Platform:** Built self-service sign-up with waitlist and email verification, secure sessions, CSRF checks, and rate limits; staging and production run on ECS, deployed via CI with **13 alarms**.

HackerRank / Senior Software Engineer — Nov 2021 – Aug 2026 · Remote

- **MCP Server for HackerRank B2B (0-to-1):** Took the B2B MCP server from idea to production in **2 weeks**, exposing platform capabilities as tools for AI assistants and agentic workflows; **42%** of users onboarded within a month.
- **AI Assessment Generation:** Architected a GPT-powered pipeline that converts a job description into a complete HackerRank test in **7 seconds** (down from 3 days), improving hiring-team efficiency by **73%** and enabling **10x** throughput for customers.
- **Internal AI Agents:** Built Support Ticket and Analytics AI agents on LLM pipelines with human-in-the-loop review, reducing support resolution time by **36%** (36 hrs to 23 hrs) and saving 5% of frontend dev effort per initiative by auto-generating analytics code snippets for engineer review.
- **Test Creation & Editing Platform (0-to-1):** Led design and development in React.js and TypeScript, now powering **1.9M+ tests** globally; reduced median time-to-publish by **61.7%** (58.3s), cut user drop-off by **17%**, improved operational efficiency by **42.4%**, and improved page load by **1.6x**.
- **Monolith Re-platforming:** Led a team of 4 engineers to re-platform HackerRank's monolithic frontend into independent micro-applications, reducing build size by **35%** and improving average page performance by **28%**, eliminating CI/CD bottlenecks via service-worker and manifest-based prefetching, and laying the architectural foundation for agentic workflows.

- **Certified Assessments (0-to-1):** Conceived and launched from scratch, driving a **52%** adoption increase and standardizing **7%** of all platform assessments globally.
- **Automated Integrity System:** Designed a leaked-question detection and auto-replacement system achieving **94%** efficiency with a **52-minute** average turnaround across millions of active tests.
- Established the **Performance-First Engineering** vertical company-wide across 3+ product lines and drove technical direction across Product, Design, and Backend Engineering: Core Web Vitals standards, quarterly roadmaps, system design reviews, and end-to-end feature delivery as frontend technical lead.

Awards: SPOT Award x2 (Test Creation Experience, HackerRank Question Library) · Kudos Award (Certified Assessments)

Tata Consultancy Services (TCS) / Full-Stack Software Engineer (TCS Digital) Sep 2018 – Nov 2021 · Bengaluru

- Led full-stack development of **6+ B2B SaaS products from 0 to 1**, including **TCS Circle4Life (200K users)** and **TCS ClickFit (150K users)**, using React.js, Node.js, and GCP.
- Built the frontend for **TCS Digital Health Pass**, a blockchain-based COVID-19 vaccination verification system for UNAIDS and the International Red Cross Federation (React Native).
- Developed the **serverless backend** for the SIFAS mobile app using Node.js, GCP Cloud Functions, and Firestore; delivered products for AIA Insurance Singapore (React Native app and AEM web portal).
- Ranked in the **top 1.5K of 60,000** TCS Digital Cadre; mentored 25 engineering interns via CSR initiatives.

Awards: Special Initiative x3 (Circle4Life, ClickFit, Sustainathon) · CSR Award (Mentorship) · On the Spot Award (AIA)

Freelance / Software Developer & Designer Aug 2016 – Feb 2018

- Consulted **150+ clients** globally on web/mobile development and UI/UX design.

NOTABLE SIDE PROJECTS

- **TechInView.dev** Next.js, TypeScript, Supabase/PostgreSQL, Tailwind, Deepgram Voice, Claude API · 2026
  Live voice-first AI mock-interview platform with a real-time streaming AI interviewer, live code editor, and 5D-calibrated scoring. Website · GitHub
- **Runboard.dev** Electron, React, TypeScript, Supabase/PostgreSQL, Tailwind, Claude API, Vercel · 2026
  Desktop Kanban board for orchestrating AI coding sessions across Claude Code, Cursor, and Codex, with real-time session orchestration, live streaming terminal output, and cost tracking. GitHub
- **Morcha Rush** Three.js, JavaScript, Capacitor, PostHog · 2026
  Satirical 3D endless runner through a festive Indian street march, playable in the browser on desktop and mobile, with iOS and Android builds. Live · GitHub
- **Mini-me** JavaScript, Google Apps Script, GitHub Actions, Claude API · 2026
  Personal AI agent that runs the repetitive parts of my week, including email triage, mentorship scheduling, code review, and content drafting, saving **6+ hours/week** through LLM-driven orchestration.

EDUCATION

B.Tech, Information Technology · MCKV Institute of Engineering (MAKAUT) · GPA 8.0 · Internships: HP, IOCL 2018

ACHIEVEMENTS & CERTIFICATIONS

- **2nd Runner-Up:** HackGPT-3, HackerRank Internal Hackathon 2024 (MVP shipped to production)
- **Finalist:** Google Cloud DevJam Hackathon 2020 (Rank 19 / 89,000+)
- **Top 1,000 of 1M+:** Facebook Open-Source Immersion Challenge 2020
- **Winner:** COVID-19 Hack Challenge (PandoConnect, shipped in 2 weeks)
- **Prime Minister's Scholarship:** Indian Air Force, Ministry of Defence, Government of India (INR 1,00,000)
- **All India Rank 28 / 80,000+:** Junior Mathematics Olympiad
- **Certificate of Graduation:** "Masterclass: How to Build Digital Products", Product School

LEADERSHIP & COMMUNITY

- **Global Mentor** to **5,000+ individuals** across 40+ countries (10,000+ minutes of 1:1 sessions) on career growth, frontend engineering, and product thinking (ADPList, TopMate, CodeCoach).
- Director of Professional Development, Rotaract Club of MCKV (2016–18); IEI Batch Coordinator, MCKV (2014–18).