

Divyansh Agarwal

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SUMMARY

Software engineer with 4+ years building scalable backend systems, real-time services, and AI-driven automation. I design distributed, serverless architectures and ship AI-native workflows that automate operations, owning features end to end from design through delivery. Focused on API performance, event-driven systems, and AWS.

SKILLS

Languages: Golang, Python, JavaScript, Java, SQL

Frameworks: Node.js, React, Django, Gin, FastAPI

AI & Automation: AI Workflows, Agent Development, STP Automation, LLM Integration, Generative AI

Cloud & DevOps: AWS (Lambda, S3, RDS, EC2), Serverless Framework, Docker, CI/CD

Architecture: Distributed Systems, Microservices, Scalability, Event-Driven and Pub/Sub

Databases: PostgreSQL, MySQL, MongoDB, Redis

Protocols: REST, WebSocket, WebRTC, GraphQL

EXPERIENCE

Verto (YC W19)

Software Engineer

 Pune, India

Dec 2024 - Present

- Designed and built an **AI-powered onboarding assistant** and configurable workflow manager that adapts to country, industry, and admin preferences, **cutting profile onboarding time by 40%**.
- Built a **straight-through processing (STP) pipeline** on top of the onboarding assistant and native AI workflows to fully automate onboarding for eligible profiles, **reducing turnaround from 48 hours to 20 minutes**.
- Built a **deep research agent** inside the onboarding assistant that screens each applicant against onboarding policies, researching their details across public sources on the internet to surface and flag risk signals for review, **cutting manual risk-review time per profile from ~24 hours to ~10 minutes** and **catching risk signals on 40% of profiles that manual review was missing**.
- Designed and built a **real-time WebSocket service on a pub/sub, serverless model**, replacing long polling to improve responsiveness and lower infrastructure cost.
- Powered **web push notifications** through the WebSocket service, **raising user responsiveness during live sessions by 40%**.
- **Rebuilt the case management system** by finding and removing API bottlenecks and adding a real-time notification layer, **bringing average response time down from 100ms to 40ms**.
- Added automated, context-aware notifications that **cut manual support follow-ups by 20%** and improved communication quality.
- Added **biometric login (WebAuthn)** and biometric MFA, **cutting login time by 40%** and **raising MFA adoption by 30%**.

Tata Consultancy Services

Software Engineer

 New Delhi, India

Aug 2021 - Dec 2024

- Optimized **generative-AI backend systems** with Redis caching and better request handling, **cutting inference latency by 20%**.
- Built and maintained **REST APIs serving 500,000+ daily requests** at **25ms p99 latency** for secure enterprise communication.
- **Led a cloud data engineering project** over petabyte-scale transactional data, **cutting processing time by 50%** through workflow improvements.
- Built **10+ data pipelines** and added automated regression testing, improving data quality and coverage.

Ewently

Co-Founder and Lead, Technical Development

📍 New Delhi, India

Mar 2020 - Jul 2022

- Co-founded and led an online event live-streaming platform, managing a **team of 5** and **cutting backend latency by 30%**.
- Built a scalable event ticketing system with **Node.js, GraphQL, and AWS**, holding **99.9% uptime** under thousands of concurrent users.
- Built a secure **OTP service for two-factor authentication**, **reducing unauthorized login attempts by 20%**.
- Built a video meeting system with **Python, Golang, WebRTC, RTP, and RTMP** that served **1M+ monthly sessions**.

PROJECTS

Onboarding STP Pipeline

Python, AI Workflows, AWS

- Straight-through processing pipeline that pairs an AI onboarding assistant with native AI workflows to automate eligible-profile onboarding, **reducing turnaround from 48 hours to 20 minutes**.

Deep Research Risk Agent

AI Workflows, LLM, Python

- Autonomous research agent built into the onboarding assistant that investigates each applicant across public sources on the internet against company policies, then surfaces and flags risk signals for the team, **cutting manual risk-review time per profile from ~24 hours to ~10 minutes** and **catching risk signals on 40% of profiles that manual review was missing**.

Real-Time Socket Service

Serverless, WebSocket, Pub/Sub, AWS

- Fully serverless WebSocket and pub/sub service that replaced long polling to power real-time features across the product: web push notifications that **raised user responsiveness during live sessions by 40%**, and a live case-management (CMS) notification layer that **cut average response time from 100ms to 40ms**.

Video Meeting Platform

Python, Golang, WebRTC

- WebRTC video conferencing and live-streaming system that served **1M+ monthly sessions** over low-latency RTP and RTMP media.

Bank App

Golang

- Banking-operations service that simulates account creation, user management, and transactions at 1,000+ simulated daily transactions, with payment-gateway and loan features.

EDUCATION

Guru Gobind Singh Indraprastha University

Aug 2017 - Aug 2021, Delhi, India

B.Tech, Computer Science and Engineering. CGPA 9.1 / 10.0

CERTIFICATIONS

AWS Certified Developer, Associate

Apr 2024 - Apr 2027

Validates designing, deploying, and debugging cloud-native applications on AWS (Lambda, DynamoDB, API Gateway, S3).

ACHIEVEMENTS & LEADERSHIP

- **Finalist, Smart India Hackathon** (Bangalore, 2019). Reached the national finals of one of the country's largest engineering hackathons.
- **Head of Web Development, Google Developers Group (DSC BVP)** (2019 - 2020). Led a team to build the chapter event platform, cutting registration time by 90% and growing registrations by 30%.
- **Swachh Bharat Internship, Govt. of India** (2019). Contributed 100 hours to community cleanliness and public-awareness drives under the Swachh Bharat Mission.

PUBLICATIONS / BLOGS

- **How to Create a Login Activity Tracker using JWT in Node.js**. A practical guide to securely tracking user sessions and login activity with JWT.
- **How to Make a Scalable OTP Service using Node.js**. Designing a rate-limited, horizontally scalable OTP service for two-factor authentication.