

Raj Dubal

Full-Stack Software Engineer

B.E. Computer Engineering (Hons. Artificial Intelligence and Machine Learning)

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🌐 Portfolio

SYNOPSIS

Dynamic, results-driven 2x AWS Certified Full-Stack Software Engineer with **2+ years of experience** building scalable, business-critical software across **capital markets**, cloud, and AI-powered applications. Experienced in delivering mission-critical solutions for global financial institutions including **Vanguard, BlackRock, J.P. Morgan, Goldman Sachs, and CME Group**, with expertise in **T-SQL, Node.js, React, Redis, Docker, AWS**, and modern AI technologies.

EXPERIENCE

•Software Engineer Level 1

Hexaware Technologies 2024 – Present

Project: London Stock Exchange Group (LSEG)

- Delivered business-critical stock market index and financial data products for the **London Stock Exchange Group (LSEG)**, serving global financial institutions including **Vanguard, BlackRock, J.P. Morgan, Goldman Sachs, and CME Group**.
- Identified a critical business requirement gap during the implementation of **14,000+ ICB-level indices (8 GB of market data)** by introducing a scalable hierarchical parent-child model (Industry → Supersector → Sector → Subsector), enabling recursive product population and significantly reducing future engineering effort for new index classifications.
- Consistently performed as a top contributor on a high-frequency engineering team, delivering **12 of the team's 19 production releases in Q1 2026** with zero production defects while consistently meeting aggressive two-week sprint timelines.
- Designed an automation pipeline that extracts product data into structured JSON and feeds it to an LLM to auto-generate structured **.md** analysis documents, **slashing developer analysis time by 87.5%** (from 2 days to 2 hours) and accelerating overall project delivery.
- Reverse-mentored **senior engineers** (15+ years of experience) on AI-assisted development workflows including provisioning AI tool access, writing **effective prompts**, and authoring **tSQLt tests** using AI assistance.
- **2x Hexaware Award Winner** - Received the **Learning Ninja Award** for demonstrating a culture of continuous learning through 60+ hours of Udemy learning, industry certifications, and active participation in company-wide ideathons and hackathons; awarded the **Topper's Award** for graduating as the Best Performer in the Hexaware Graduate Engineer Trainee Program.

PROJECTS

•easyurl.in - URL Shortener & Analytics

[GitHub](#) / [Live Demo](#)

- Built a full-stack URL shortener with **real-time click analytics** segmented by country, device, browser, operating system, and language.
- Implemented the Redis cache-aside pattern for **sub-millisecond redirects** with a 15-minute TTL and immediate cache invalidation on link updates.
- Designed a dynamic analytics engine with adaptive daily, weekly, and monthly time bucketing using PostgreSQL GROUP BY queries to prevent chart compression across varying date ranges.
- Developed anonymous URL shortening with **IP-based rate limiting** backed by PostgreSQL and integrated **Google Safe Browsing v4** with a local domain escalation system for malicious link detection.
- Deployed on an Oracle Cloud ARM64 VM using **Docker multi-stage builds, Nginx reverse proxy**, and Let's Encrypt SSL.
- **Tech Stack:** React, TypeScript, Node.js, Express, PostgreSQL, Redis, Docker, Nginx

•Intern Flow - AI-Powered Internship Management

[Live Demo](#)

- Built a 7-role internship workflow platform for **Hexaware's internship lifecycle**, replacing scattered, manual email chains between HR and interns with a centralized, stage-gated system, reducing HR coordination time by **60%** and enforcing valid transitions across an 8-stage lifecycle, from referral to certificate issuance.
- Developed **AI-powered resume parsing** using a dual-provider fallback chain (**Claude** primary, **Gemini Flash** fallback), processed asynchronously via **BullMQ** with live status updates using **Server-Sent Events (SSE)**.

- Engineered an **NDA e-signature workflow** using **single-use Redis tokens** with automatic workflow progression and role-based notifications.
- Implemented **SLA monitoring**, automatic breach detection, startup recovery scanning, and scheduled job recovery to ensure resilience against **Redis restarts** and worker downtime.
- Built **real-time notifications** using **WebSockets** and a **cost-optimized AI assistant** that intelligently invokes LLMs only when required, reducing inference costs.
- Migrated the infrastructure from **AWS (RDS/S3)** to a self-hosted **Oracle Cloud ARM64 VM** using **Docker Compose**, isolating services with dedicated database roles and Docker bridge networking.
- **Tech Stack:** Node.js, TypeScript, PostgreSQL, Redis, BullMQ, WebSockets, SSE, Claude, Gemini Flash, Docker, Oracle Cloud

CERTIFICATIONS

• AWS Certified AI Practitioner Amazon Web Services	<i>Issue Date: 02 August 2026</i> <u>Certificate</u>
• AWS Certified Cloud Practitioner Amazon Web Services	<i>Issue Date: 15 August 2025</i> <u>Certificate</u>
• Postman API Fundamentals Student Expert Postman	<i>Issue Date: 23 July 2025</i> <u>Certificate</u>
• Scrum Fundamentals Certified SCRUMstudy	<i>Issue Date: 08 September 2025</i> <u>Certificate</u>
• Godrej Data Analytics Program Certification Godrej Industries	<i>Issue Date: 01 April 2023</i> <u>Certificate</u>

TECHNICAL SKILLS

Programming Languages

TypeScript, JavaScript, C++, Python, C#, Java

Frontend

React.js, HTML5, CSS3, Tailwind CSS, Redux

Backend

Node.js, Express.js, ASP.NET Core, Spring Boot, REST APIs, Authentication Session Management, BullMQ, WebSockets, Server-Sent Events (SSE)

Databases & Caching

T-SQL, PostgreSQL, Redis, Schema Design, Query Optimization

Cloud & DevOps

AWS (EC2, RDS, S3), Oracle Cloud Infrastructure (ARM64 VMs), Docker, Docker Compose, Nginx, CI/CD

Testing

tSQLt, Postman, Beyond Compare, Redgate SQL Test

AI & LLMs

Anthropic Claude, Google Gemini, LLM APIs

Tools

Git, GitHub, Jira, Confluence, Jenkins, GitHub Copilot, Claude Code, Microsoft Excel

Domains

Capital Markets, Investment Banking

EDUCATION

•B.E in Computer Engineering <i>Vasantdada Patil Pratishthan's College Of Engineering And Visual Arts,Mumbai</i>	<i>2020–24</i> CGPA: 8.70/10
•HSC Science <i>Vidyamandir High School and Junior College,Islampur</i>	<i>2020</i> Percentage:68.62
•CBSE <i>Prakash Public School,Islampur</i>	<i>2018</i> Percentage:76.6