

# Nikhil Kumar Singh

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**Lead Software & AI Engineer** with 9+ years designing and delivering cloud-native distributed systems across financial services, SaaS, and data platforms. Expert in C# (.NET) and Python (FastAPI, Django, Flask), building secure, high-availability services on AWS and Azure. Streamlined manual processes from weeks to minutes, reducing downtime by up to 50%, and modernizing legacy systems to resilient, scalable architectures. Experienced in serverless design, SQL performance tuning, CI/CD automation, and mentoring cross-functional engineering teams.

## PROFESSIONAL EXPERIENCE

Twikara

Dublin, Ireland

Lead Software and AI Engineer

Nov 2025 - Present

- Engineered an AI-powered “**Resume Crafter**” that optimizes resume for candidates, integrating a feedback loop that evaluates content against specific job descriptions to increase ATS compatibility.
- Attained sub-200 ms end-to-end latency for AI-powered mock interviews by building a real-time bidirectional audio streaming system with WebSockets and FastAPI.
- Lowered interview generation latency by 40% by designing an intelligent interview pipeline using GPT-4o and Google Gemini that dynamically tailors questions to user resumes.
- Architected and deployed a scalable SaaS platform using Next.js 14, React, PostgreSQL, Stripe, and Docker, supporting multi-tier subscription plans and secure global payment processing.

State Street

Dublin, Ireland

Software Developer [Platform Engineering]

APR 2022 - Nov 2025

- Refined platform reliability to 99.9% availability by engineering streamlined threat detection and remediation workflows, resulting in a 30% reduction in system downtime.
- Optimized manual auditing time by 99% (from 15 days to minutes) by developing custom Python script to parse NIST/CIS benchmarks for quarterly cybersecurity compliance reports.
- Designed a proprietary “Elevated Access” microservice for 1,300+ administrators, integrating ServiceNow validation to ensure temporary, secure, and audited server access.
- Enhanced security posture for a fleet of 50,000+ servers by standardizing weekly vulnerability data collection and analysis jobs.
- Drove the modernization of mission-critical apps from .NET 4.8 to contemporary .NET (C# 10+), enabling cross-platform deployment and improving performance benchmarks.
- Optimized project delivery speed by 20% by leading Agile transformations and Scrum ceremonies, securing high sprint predictability across cross-functional squads.
- Achieved consistent zero-downtime releases by streamlining CI/CD pipelines within Azure DevOps for all production environments.

Sonra Intelligence

Dublin, Ireland

Data Engineer

SEP 2021 - Mar 2022

- Decreased scope creep by 15% and accelerated delivery predictability by introducing structured requirement analysis and validation with business stakeholders.
- Delivered data ingestion accuracy exceeding 98% into Snowflake by developing robust validation, reconciliation, and quality assurance checks within the ingestion pipelines.
- Decreased platform downtime by 50% via database performance optimization and security hardening applied to core data services.
- Constructed comprehensive end-to-end ETL/ELT pipelines leveraging Python and SQL, resulting in a 30% increase in data throughput for both batch and streaming analytics workloads.
- Eliminated over 100 hours of monthly manual effort by designing ingestion and monitoring workflows incorporating advanced alerting and retry mechanisms.
- Developed a data integration platform (Oracle → Snowflake → Power BI), orchestrated by Airflow, to deliver reliable, low-maintenance business intelligence to key stakeholders.

**Accenture Solutions  
Software Developer**

**Mumbai, India  
Nov 2016 - Jan 2021**

- **Delivered highly stable web applications** for seven US-based insurance clients, managing the full development lifecycle from inception to scale.
- **Steered Oracle-to-PostgreSQL migrations** for seven insurance clients, achieving **100% data integrity** and maintaining **zero downtime** during critical cutovers.
- **Designed a regression testing framework** in Python and Java using Selenium for policy modification detection and **slashed testing time by 97%**.
- **Reduced unit testing overhead by 75%** through bash scripting, significantly lowering operational costs and accelerating release cycles.
- **Orchestrated end-to-end client releases**, managing everything from requirements to release to achieve **100% on-time delivery**.

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## **EDUCATION**

**NATIONAL COLLEGE OF IRELAND | MSc in CLOUD COMPUTING (2021-2022) | Dublin, Ireland**

**UNIVERSITY OF MUMBAI | BACHELOR OF ENGINEERING IN ELECTRONICS (2012-2016) | Mumbai, India**

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## **ADDITIONAL INFORMATION**

- **Languages & API Standards:** Python (Flask, Django, FastAPI), C# (.NET), ASP.NET Core, RESTful APIs, GraphQL, SQL.
- **AWS & Cloud Infrastructure:** AWS (Lambda, Step Functions, S3, EC2, CloudWatch, API Gateway, EventBridge, IAM, SQS, RDS), Terraform, Microsoft Azure, Azure DevOps, Serverless Framework, Infrastructure as Code (IaC)
- **Data Engineering & Analytics:** Snowflake, Airflow, PostgreSQL, Oracle, Databricks, Kafka, Redshift, Power BI, ETL/ELT Pipelines, Data Modeling, Elasticsearch.
- **AI:** Large Language Models (LLMs), Claude AI, AI Agents & Skills, Prompt Engineering.
- **Containerization & Orchestration:** Docker, Kubernetes, Chef, Ansible.
- **CI/CD & Quality Assurance:** Azure DevOps, Git, Regression Testing, Unit Testing (TDD), Integration Testing, Code Quality, Zero-Downtime Deployments.
- **Leadership & Collaboration:** Technical Mentorship, Cross-Functional Team Coordination, Code Review, Best Practices, Agile/Scrum Leadership, Knowledge Sharing