



KUNAL VYAS

DIGITAL TRANSFORMATION & ENGINEERING LEADER

CONTACT

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EDUCATION

Astrophysics

St. Mary's University,
Halifax, NS, Canada
2021- 2022

PG Diploma (Business Administration)

ICFAI, Hyderabad, India
2008-2011

PG Diploma (Software Engineering)

MISEM, Pune, India
2001-2002

Bachelor of Engineering

Nagpur University
1997-2001

CERTIFICATIONS

AWS Cloud Practitioner

Amazon Web Services
2022

Certified Scrum Master

Scrum Alliance
2019

Oracle Certified Java Programmer

Oracle
2016

PROFESSIONAL OVERVIEW

Technology and engineering executive with a proven record of **building and scaling cloud-native platforms, modernizing enterprise data ecosystems, and leading complex, large-scale transformations**. Transformed legacy, manual operations into automated, real-time, **AI-enabled architectures that deliver measurable gains in cost efficiency, performance, reliability, and business agility**. Brings deep expertise in architecting **distributed systems, event-driven microservices, and enterprise data platforms that power mission-critical analytics at scale**. Lead cross-functional initiatives spanning cloud modernization, data engineering, DevOps automation, and AI adoption—accelerating time to insight, strengthening operational resilience, and enabling data-driven decisions across global organizations.

WORK EXPERIENCE

Director, Data Engineering

Nielsen (Sports), Halifax, NS, Canada

06/2024 – 06/2026

Built and led a high-performing global engineering organization across the United States, Canada, Germany, Israel, and India, transforming manual operations into automated, AI-ready platforms. **Accelerated AI adoption by championing an AI-first culture** and empowering teams to innovate with clean, trusted data for advanced AI/ML solutions.

- Introduced an LLM-assisted code-generation workflow that **increased engineering productivity by 35%**, enabling delivery of one to three additional features per quarter.
- Managed a \$1.25M engineering budget**, redirecting 60% of investment from legacy systems to AI/ML.
- Engineered automated ETL pipelines that **cut critical data-processing latency from two weeks to 45 minutes**, enabling same-day advertising decisions for 80% of clients enabling real-time analytics for more than 1,000 business stakeholders.
- Established scalable data governance and compliance frameworks across a complex global data estate, strengthening data quality, trust, and regulatory alignment.

Tech Stack: Databricks; AWS (Apache Iceberg, RDS, DynamoDB, Redshift, Lake Formation, EMR, DMS, MWAA, Glue, Lambda, Athena, S3, EC2); dbt; Spark; Python; MySQL; Elasticsearch; ClickHouse; Docker; Kubernetes; GitLab; Kiro; Amazon Q; LangChain (Deep Agents); Atlassian Jira and Confluence; Miro.

Senior Engineering Manager

Nielsen (Sports), Halifax, NS, Canada

06/2022 - 06/2024

Architected and led a cloud-native data platform supporting an \$85M sports analytics business. Directed the transition from monolithic architecture to event-driven microservices using Kafka and AWS DMS, **delivering real-time insights to more**

than 80% of clients while establishing robust CI/CD and observability capabilities. Partnered with Product teams to translate business priorities into architectural decisions, technical roadmaps, and sprint plans, **balancing feature delivery** with **technical debt reduction** through an **80/20** investment model.

- Designed and scaled a cloud-native data platform that **reduced infrastructure costs by 40%** through open-source adoption and architectural modernization.
- Replaced error-prone quarterly reporting processes with production-grade daily data pipelines, **reducing data inconsistencies by 95%** and significantly strengthening stakeholder confidence in enterprise reporting.
- **Established the organization's first dedicated data engineering function**, recruiting and scaling a team of more than 15 engineers and delivering a modern platform that reduced time-to-insight by 70% and became core infrastructure for product decision-making.
- Introduced disciplined platform planning and delivery practices that align architecture investments with product priorities, sustaining an **80/20 balance between feature delivery and technical debt reduction**.

Tech Stack: AWS (RDS, DynamoDB, Redshift, DMS, Glue, Lambda, S3, EC2); Apache Kafka; dbt; Python; Java; MySQL; Elasticsearch; Docker; Kubernetes; GitLab; Atlassian Jira and Confluence.

Engineering Manager

Nielsen (Sports), Halifax, NS, Canada

01/2020 - 06/2022

Led the modernization of legacy infrastructure into a high throughput microservices architecture while establishing robust CI/CD and observability capabilities. Streamlined master data management for sports brand exposure products and harmonized multiple datasets to improve data consistency, accessibility, and operational efficiency.

- Led a nine-engineer team in rebuilding a legacy rates and ratings system, replacing a monolithic architecture with event-driven microservices using Kafka, Node.js, and AngularJS to **increase data-processing throughput tenfold and reduce annual infrastructure costs by \$100K**.
- Implemented a CI/CD pipeline with automated testing, security scanning, and zero-downtime deployments, **cutting deployment time from four hours to 20 minutes**.
- Built a real-time infrastructure health monitoring platform that linked downtime to business impact, enabling proactive intervention and **raising system availability to 99.95%**.
- Delivered a **30% reduction in infrastructure costs** through architectural optimization and operational efficiencies.

Tech Stack: AWS (RDS, DynamoDB, Lambda, S3, EC2), Apache Kafka, Java, Angular JS, MySQL, Elasticsearch, Docker, kubernetes, Hashicorp Vault, Prometheus, Grafana, DataDog, Github, Atlassian Jira & Confluence.

Enterprise Architect

Tata Consultancy Services (TCS), Toronto, ON, Canada

01/2019 – 01/2020

Defined an **enterprise-wide digital transformation roadmap** spanning around 3 years **in partnership with C-suite stakeholders** for a leading financial services client, involving **migration of 40+ middleware applications** from on-premises legacy

systems to cloud-native architecture while ensuring business continuity and supporting revenue growth.

- Spearheaded a \$15M technology stack modernization program spanning 3 years, **replacing a monolithic ERP system with composable SaaS solutions and cloud platforms**, reducing total cost of ownership by 40%.
- **Reduced claims processing latency from several days to minutes** by redesigning and optimizing end-to-end processing workflows, dramatically improving end-user experience and operational responsiveness.
- **Achieved and sustained 99.95% enterprise uptime** by modernizing legacy core systems without disrupting critical business operations, demonstrating successful large-scale transformation of mission-critical infrastructure.
- Executed proof-of-concept initiatives for emerging technologies, including containers, serverless computing, and AI-driven automation, and **established enterprise architecture patterns that improved team productivity by 25%**.

Tech Stack: Java, .Net, Vue JS, DB2, IBM Case Manager, FileNet, DataCap, Actian DataConnect, Automation Anywhere (RPA), AIX, Windows Server, SVN & Jenkins.

Engineering Manager

Gracenote (Sports), Halifax, NS, Canada

06/2017 – 01/2019

Engineered a high-accuracy real-time event capture and data normalization platform that reduced manual effort and improved cross-sport analytics capabilities. Cultivated a high-performing engineering culture through structured 1:1s, quarterly career development planning, and technical mentorship, **contributing to 3 internal promotions and 2 engineers progressing into tech lead roles within 18 months**.

- Directed a real-time sports event capture system processing live video streams to detect and log in-game events (goals, penalties, key plays) with **90% accuracy**, automating manual tagging that previously required 25+ FTE.
- Designed a multi-sport data normalization engine standardizing statistics across football, basketball, baseball, and soccer into a unified schema, enabling **cross-sport analytics** and reducing integration effort for new sports by 60%.

Tech Stack: Java, Spring, AWS (RDS, S3, EC2), Apache Kafka, Debezium, Vue JS, Postgres, Terraform, Vault, Vagrant, GitHub, Docker, Kubernetes, Atlassian Jira & Confluence.

Principal Consultant

NTT Data Inc., Halifax, NS, Canada

03/2012 – 06/2017

Directed cloud architectural design and operational performance of high-traffic platforms, enhancing a benefits application to support **millions of daily transactions** and building a scalable RESTful API ecosystem. Architected **a RESTful API platform with 50+ endpoints** supporting web and mobile applications, implementing **Open API specifications**, versioning strategy, partner integration approach, and API gateway management to **handle 10M+ requests daily**.

- **Achieved 35% improvement in code quality scores** and reduced code review cycles from 3+ days to 8 hours by leading a 5-member development team and defining coding standards, architecture patterns, and technology selection.

- Optimized a high-volume employee benefits application handling 2M+ daily transactions by implementing **database query optimization, connection pooling, and Redis caching, increasing throughput by 20%.**

Tech Stack: Java, Spring, React JS, RESTful Web Services, IBM DB2, Docker, SDL Tridion, SonarQube, SonaType Nexus, Git, Maven, IBM UrbanCode & Jenkins.

Sr. Software Engineer, Technical Lead & Project Manager

Infosys, India / USA / Canada

07/2005 – 03/2012

Progressed through roles from Senior Software Developer to Project Manager, working with multiple Fortune 500 clients and contributing across both technical delivery and project leadership functions. Gained experience spanning software development, solution design, and project execution, along with exposure to stakeholders and team coordination. Developed detailed project plans by defining scope, estimating effort, and allocating resources to ensure the timely delivery of milestones and deliverables. Managed project risk by identifying potential issues early and implementing mitigation strategies to maintain project timelines and outcomes.

- **Contributed to RFP responses and effort estimations to support pre-sales** and solution planning activities.
- Produced regular status reports to maintain transparency and ensure clear communication with clients and internal stakeholders. Monitored and tracked project milestones from initiation through to successful completion.
- Designed architectural blueprints, proofs-of-concept, implementation plans, roadmaps, and technical documentation.

Tech Stack: Java, Struts, Spring, EJB, Hibernate, SOAP & RESTful Web Services, Oracle DB, IBM MQ, IBM WebSphere, AIX, HP UX, OTM, OBIEE, ODI, TeamSite, Visual Source Safe, SVN, Maven, Jenkins.

Software Developer

eCaliber Ltd., India

06/2002 – 07/2005

Developed specialized software solutions, including a POS terminal application for a leading restaurant chain requiring real-time data replication across data centers, and an inventory management system for a heavy machinery stockist. Demonstrated strong understanding of business requirements, improved development efficiency through component reuse, and applied core software design and development principles.

- Contributed to the architecture and design of an enterprise CRM platform supporting 100+ active clients.
- Participated in system design reviews and enhanced code quality through targeted improvements and refactoring efforts.
- Redesigned user interface components, increasing user engagement by 40%.

Tech Stack: VB6, VB.Net, C#, ASP.Net, MS SQL Server and MS Access.