# Pranshu Nijhawan
## Engineering Leader | SaaS Architect

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**Portfolio**: https://www.pranshunijhawan.dev/
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## Summary

- Hands-on **engineering leader** with more than **9 years** of experience in IT, providing consulting & delivery of solution architecture, product development, data analytics, cloud architecture & cost optimisation, SaaS and DevOps strategy.
- Currently working at McKinsey & Company as an **Engineering Manager** and **Architect** of a large scale SaaS platform Promotion Advisor driving sales and revenue with an uptime of **99.9%**.
- Designed and architected **SearchSphere a fully configurable Multi-Tenant Search Platform** using **Typescript, Node.JS**, and **PostgreSQL**, leveraging **vectorization** and **Retrieval Augmented Generation (RAG)** techniques to enable both global and dimension-based searching with the ability to onboard new dimensions without any code changes, resulting in a successful decommissioning Elasticsearch, which resulted in cost savings of over $2 million.
- Engineered a highly scalable and reliable, **Zero-Downtime ETL platform** using **Databricks, Spark, Azure Data Factory**, and **PostgreSQL** based on Blue/Green slotting strategy processing over **200 million records** across 100+ tables in under **15 minutes** using CDC techniques and dynamic schema allocation strategies.
- Architected **Orchestron**, a high-performance **Data Processing and Explosion** platform utilizing **.NET** and **Spark** on a Kubernetes infrastructure featuring a modular architecture with configurable rules and a plug-and-play design for seamless data transformation and explosion managed by **Generative AI Agents** for intelligent orchestration and rule management.
- Designed and implemented a high-performance **Hybrid Transactional/Analytical Processing (HTAP)** based **Analytics Platform** leveraging **Python, Spark, and SQL** within Kubernetes-based orchestration enabling real-time forecasting and strategic planning powered by econometric models by analyzing historical data comparators and coefficients with initial analysis completing in under **a minute**, scaling to datasets exceeding **2.8 billion records**.
- Developed an **Intelligent Distributed Release Management Platform**, leveraging **Serverless Functions**, **Azure IoT Hub**, and **Azure CosmosDB** Orchestrating platform updates across **300+ million devices** using scalable techniques such as fan-out/fan-in workflows, backed by robust monitoring frameworks and emergency rollback mechanisms.
- Expert in designing scalable distributed platforms using **domain-driven microservices**, leveraging **React, C#, .NET, Node.js**, and **Spark** ensuring resilience and scalability with serverless and Kubernetes deployments, optimizing performance across data stores like **PostgreSQL**, **SQL Server**, and **Azure CosmosDB**.

## Skills

- **Languages:** C#, JavaScript, TypeScript, Python, Java, SQL
- **Frameworks and Tools:** .NET, Node.JS, React, Angular, GraphQL, PostgreSQL, SQL Server, Azure, AWS, Databricks
- **Concepts**: Cloud Architecture, OOPS, Microservices, Domain Driven Architecture, Data Streaming

## Professional Experience

**McKinsey & Company** (*March 2022 – Present*)                          Title: Senior Software Engineer 2

- **Architectural Leadership & Design**: Architected **SearchSphere** and **Orchestron**, utilizing techniques like **vectorization, RAG**, .NET, Spark, and Kubernetes for scalable, modular solutions with **AI-driven orchestration**s. Led architectural assessments, ADRs, and tech OKRs to ensure alignment with organizational goals.
- **Team Leadership & Development**: Leading a team of **28 engineers**, including **five tech leads** and **23 developers**, managing skill development, career progression, and overall team performance.
- **Scalable ETL System Engineering**: Engineered a high-performance, **zero-downtime ETL platform** processing over **200 million records in under 15 minutes**, utilizing **Databricks, Spark, Azure Data Factory**, and **PostgreSQL** based on Blue/Green slotting strategy and CDC techniques to ensure scalability and reliability.
- **Cross-Functional Collaboration & Compliance**: Collaborated with regulatory and compliance teams, such as Infosec and SOC2 audit teams, successfully led the initiative to get the product SOC2 certified.
- **Future Architecture Roadmap Management**: Orchestrated the management of the Future Architecture Runway, optimizing the product roadmap, increasing delivery efficiency by 25%.
- **Performance Optimization & System Redesign**: Led initiatives focused on performance benchmarking, cost optimizations, and system redesigns like Cloud Migrations and centralizing key services and sharable modules.

**Condeco, now Eptura** (*April 2021 – March 2022*)                                        <span style="color:blue">Title: Principal Engineer</span>

- **Architectural Leadership & Design**: Architected an **Intelligent Distributed Release Management Platform** using **Serverless Functions**, **Azure IoT Hub**, and **Azure CosmosDB**, orchestrating updates across 300+ million devices.
- **Team Leadership & Development**: Leading a team of **20 engineers**, including **4 tech leads** and **18 developers** across 4 squads, while managing skill development and career progression.
- **Scalable Distributed Platform Engineering**: Engineered scalable distributed systems utilizing **domain-driven microservices**, **React**, **C#**, and **.NET** via Kubernetes and serverless architectures. Optimized performance and availability across data stores like **PostgreSQL** and **Azure CosmosDB**.
- **Cross-Functional Collaboration & System Optimization**: Collaborated with cross-functional teams to design and implement optimized release management workflows and POCs. Worked closely with DevOps, Infrastructure, and Compliance teams to ensure best practices in deployment and monitoring.

**Nagarro** (*December 2019 – April 2021*)                                        <span style="color:blue">Title: Senior Engineer</span>

- Developed diverse web and cloud applications for Nagarro clients across domains such as E-Commerce, Employee Management, and Inventory Systems, utilizing expertise in Angular, Ionic, and .NET Core.
- Established CI/CD pipelines with modern Cloud Computing Implemented database architecture using Code-First/DB-First with EF Core and SQL scripts for schema and stored procedures.

**Condeco, now Eptura** (*September 2018 – December 2019*)                                        <span style="color:blue">Title: Software Engineer</span>

- Lead the design, development, and enhancement of Condeco's Workspace Management Platform, using C#, .NET, React, SQL Server etc.
- Developed scalable microservices using serverless and traditional paradigms. Managed DevOps infrastructure with CI/CD pipelines documented application changes with Data-Flow Diagrams. Contributed to data model architecture.

**Gartner** (*February 2016 – August 2018*)                                        <span style="color:blue">Title: Associate Software Engineer</span>

- Led the design and development of ClearForce, Gartner's Survey Platform, an employee engagement SaaS product using C#, .NET Core, React. Managed UI/functional enhancements and bug fixes.
- Established SQL architecture by crafting Stored Procedures (SPs) and implementing SQL agent jobs for automated interactions between the tool and database.

## Certifications

- [Microsoft Certified: Azure Data Engineer Associate](#)
- [AWS Certified Developer - Associate](#)
- [Microsoft Certified: Azure Developer Associate](#)

## Educational Qualifications

**Gurgaon Institute of Technology & Management**                                        **2012 – 2016**
*B.Tech, Computer Science & Engineering*