Sateesh Kumar Singh

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Professional Summary

Accomplished **Senior Data Scientist & Technology Leader** with 20+ years of experience across **AI/ML**, **CP4D**, **Cloud Platforms**, **Data Engineering**, and **Enterprise Architecture**. Proven expertise in designing and deploying **AI-driven solutions** in **Azure, AWS**, and **GCP** environments. Adept at building **scalable architectures**, leading cross-functional teams, and delivering high-impact solutions across industries including banking, automotive, and healthcare. Skilled in implementing **CI/CD**, **MLOps**, and **cloud-native architectures** to drive innovation, business value, and technical excellence.

Key Responsibilities

- **Strategic Architecture Leadership**: Defined enterprise architectural vision aligned with business goals.
- **Enterprise Architecture Governance**: Established governance frameworks to ensure compliance and scalability.
- **Solution Design & Architecture**: Led the development of secure, scalable, and cost-effective solutions.
- **POC Validation & Technology Evaluation**: Directed proofs of concept and adoption of emerging tech.
- **Cloud & Multi-Cloud Expertise**: Architected systems on AWS, Azure, and GCP with performance tuning.
- **Security & Compliance Leadership**: Ensured architecture meets security and regulatory requirements (GDPR, DPDP).
- **Non-Functional Requirements Ownership**: Oversaw system performance, availability, and DR strategies.
- **Stakeholder Management**: Translated business needs into technology strategies in collaboration with leadership.
- **Architecture Roadmap**: Developed (CP4D) long-term technical roadmaps aligned with innovation and transformation goals.
- **Mentorship & Team Leadership**: Fostered innovation and guided architecture teams across organizations.
- **Performance Optimization**: Conducted load testing and capacity planning for system reliability.
- **Continuous Innovation**: Integrated latest tech trends like GenAI, QML, LLMs, and Serverless computing.

Key Skills & Expertise

Architecture & Strategy
- Solution & Enterprise Architecture, Architecture Governance, Technical Leadership
- Architecture Certifications (TOGAF, AWS Certified Solutions Architect – In Progress)

Cloud & DevOps
- **AWS**, **Azure**, **GCP**, Terraform, Ansible, Serverless, Cloud Architecture
- Docker, Kubernetes, Jenkins, GitHub Actions, GitLab CI, ArgoCD, Prometheus, Grafana

AI/ML, CP4D & GenAI
- Generative AI (OpenAI, Gemini, Hugging Face, LangChain, Crew AI, Agentic AI)
- Machine Learning (Scikit-learn, PyTorch, TensorFlow), NLP, Transformers, MLOps (MLflow, Vertex AI)
- Quantum ML (Qiskit, Cirq, PennyLane)

Data Engineering & Analytics
- Big Data: Apache Spark, Kafka, Flink, Hadoop
- ETL/Integration: Azure Data Factory, AWS Glue, DataStage, Airflow, CloverDX
- Data Warehousing: Snowflake, BigQuery, Redshift, Synapse
- BI Tools: Power BI, Tableau, Microsoft Fabric

Web, Low-Code, & RPA
- Web Frameworks: Django, Fast API, Flask, React.js
- Low-Code: Mendix, OutSystems, Appian
- RPA: UiPath, Automation Anywhere, Blue Prism

Professional Experience

Principal Consultant / Agentic AI Leader (Founder) – [AgenticAI Lab](#) | *Apr 205 – Present*
- Deep expertise in Agentic AI, GenAI, LLMs, RAG.
- Agentic AI & Multi-Agent Architectures (n8n Agentic AI workflow)

Senior Consultant / Specialist - Eviden (Atos) / Syntel Ltd. | *Feb 2015 – Apr 2025*
- Led architecture of AI/ML, CP4D and GenAI projects across cloud environments.
- Designed end-to-end solutions using Python, DataStage, GenAI, Mendix, and cloud-native services.
- Mentored developers and led cross-functional collaboration across international teams.

Senior Consultant - Capgemini India | *Mar 2013 – Feb 2015*
- Delivered ML models and data pipelines for banking clients like HSBC.
- Designed and optimized DataStage/CP4D -based DWH/ETL processes.

Technical Lead - Wipro Technologies | *Apr 2011 – Mar 2013*
- Architected data solutions for Citibank and Credit Suisse with a focus on CP4D, reporting, analytics, and ETL.
- Led development teams and ensured alignment with business KPIs.

System Analyst - Atos Origin India | *Aug 2007 – Apr 2011*

- Designed telecom and retail data systems; improved DWH and customer analytics.

IT Engineer - CMC Ltd. / TCS | *Jun 2005 – Aug 2007*
- Developed tax and enterprise systems; involved in Oracle Apps upgrades and Java-based portal development.

Technical Skills:

- **Quantum Computing:** QML, IBM Qiskit, Google Cirq, Xanadu PennyLane
- **AI/ML/CP4D:** Data Science, Agentic AI, GenAI, LLMs, RAG, OpenAI, ChatGPT, MLOps, TensorFlow, PyTorch, Pinecone, SageMaker, LIME/SHAP, MLflow, Scikit-learn
- **AI Framework:** Hugging Face, Haystack, LangChain, LangGraph, Crew AI, AutoGen
- **Web Framework:** Django, flask, FastAPI, React
- **Cloud:** AWS, Azure, GCP, Terraform, Ansible, AWS S3, GCS, Databricks, Vertex AI, Azure ML
- **DevOps & CI/CD:** Jenkins, Git-GitHub, ArgoCD, Docker, Kubernetes, Prometheus, Grafana
- **Big Data:** Hadoop, HDFS, MapReduce, HBase, Cassandra, Cloudera, Spark, Kafka, Flink, NiFi, Hive, Oozie, Presto, RapidMiner, Flume, Sqoop
- **RPA:** UiPath, Automation Anywhere, Blue Prism
- **Low-Code:** OutSystems, Mendix, Appian
- **NoSQL:** MongoDB, DynamoDB, Cassandra, Redis
- **Data Integration/ETL:** DataStage V11.3/9.1, SnapLogic, CloverDX, Dataflow, ADF, Glue
- **Data Warehouse:** Snowflake, GCP BigQuery, AWS Redshift, Azure Synapse Analytics
- **Scheduling Tools:** AutoSys, Control-M, Airflow
- **Data Visualization:** Tableau, Power BI, QlikView, Microsoft Fabric
- **Languages:** Python, R, SQL, PL/SQL, Unix/Linux, JavaScript
- **Databases:** Oracle, Teradata, SQL Server, PostgreSQL

Education

- **Master of Computer Applications (MCA)**

Galgotias Institute of Management & Technology (GMIT), Noida (2000–2003)
- **Master of Science (M.Sc.) – Mathematics**

Deen Dayal Upadhyay University, Gorakhpur (1998–2000)
- **Bachelor of Science (B.Sc.) – Mathematics, Chemistry**

Deen Dayal Upadhyay University, Gorakhpur (1995–1998)

Certifications

- **Cognitive Solutions AI & ML** – Atos, 2022
- **Machine Learning with TensorFlow** – Udemy, 2021
- **Cloud Engineering (Azure, AWS, GCP)** – Atos, 2020
- **Apache Airflow** – Udemy, 2025

Projects Summary

- **Data Platform Migration (DPM)** – Credit One Bank: Jan 2025 – Present
  Credit One Bank is migrating its legacy data warehouse to a modern data platform. The initiative focuses on scalable data architecture, real-time processing, and enhanced analytics capabilities.
  Architected scalable data pipelines using AWS services, optimizing financial data processing for real-time analytics.
  Utilized technologies including CP4D, AWS Cloud, ASW S3, Python, PySpark, Apache Airflow, VS Code, SQL, Snowflake, Apache Hive, Apache Atlas, Presto, Lucidchart, Gitlab.

- **Market Data Analysis (MDA)** – Moody's Analytics: Jul 2024 – Jan 2025
  Developing a system to analyze market data from various data vendors for Moody's proprietary analytical tools. The project includes data ingestion, quality validation, and predictive analytics. Integrated market data vendors, enabling predictive analytics with machine learning for financial insights.
  Utilized technologies including CP4D, AWS Cloud, ASW S3, Python, PySpark, CloverDX, PostgreSQL

- **Toyota Connected Car Cloud (Toyota TCCC)** - Toyota Motor Engineering: Oct 2023 – Jul 2024
  Toyota Connected Car Cloud (TCCC) is automotive car cloud system solution bundle with real time data flow, data storage, data management, and artificial intelligence services. In this project working on EV Charging Management Using ML, Speech Emotion Recognition Using Deep Learning, and Intoxication Detection Using Deep Learning.
  Utilized technologies including CP4D, AWS Cloud, AI/ML, MLOps, Data Science, Gen AI, Mendix Low-Code and more.

- **Metrics and Reporting System (Opel - MARS)** - Groupe PSA: Feb 2019 – Oct 2023
  Groupe PSA, a prominent French multinational automotive corporation, produces cars and motorcycles renowned by the names Peugeot, Citroën, DS, Opel, and Vauxhall. The Peugeot brand stands as PSA's primary marque, leading both in Europe and globally.
  Utilized technologies including ETL, DWH, IBM DataStage/CP4D, AI/ML, MLOps, Data Science, Gen AI and more.

- **Charles River IMS (Raniera-F8 coin)** - State Street Global Advisors: Nov 2017 – Feb 2019
  The Charles River Investment Management Solution (Charles River IMS) is a specialized platform created to automate front and middle office tasks for buy-side companies across 40+ countries, encompassing 50 out of the top 100 investment management firms.
  Utilized technologies including IBM DataStage 9.1, OutSystems, Python, PL/SQL, Linux, SQL.

- **ERM Credit Risk Repository (ERM-CRR-RDR) -** State Street Corporation: Apr 2016 – Nov 2017
  Development of the New Data Warehouse (NDW) will create one common data structure for all credit risk- related data, and for all purposes associated with that data. The new data structure will enable the comparison of credit, capital, and stress-related exposure (and limit) values allowing for effective utilization of risk information available in Risk Data Repository (RDR) daily.
  Utilized technologies including IBM DataStage 9.1, Python, PySpark, PL/SQL.

- **Operational Security Framework (OSF-RV FACETS) -** United Health Group: Sep 2015 – Apr 2016
  The Operational Security Framework (OSF) will simplify and standardize the approach to remediate enterprise gaps and create a repeatable process for on-going identification and remediation. OSF is a "get well" process that will drive security risk reduction.
  Utilized technologies including IBM DataStage 9.1, PL/SQL, Linux, Control-m, and more.

- **Consumer Relevant Merchant Data Mart (CRMDM) -** American Express: Feb 2015 – Sep 2015
  AMEX is an American multinational financial service, and it is US based company. The company is best known for its credit card, charge card businesses. In CRMDM maintain their merchant relevant non-financial information. Utilized technologies including IBM DataStage 9.1, Appian, Python, PL/SQL, Linux, SQL Navigator, Putty, WinSCP, and Citrix.

- **Global Banking Project EOS -** HSBC Holdings PLC: April 2013 – Feb 2015
  Eos is a credit portfolio management platform that enables a granular, product level view of each credit product's contribution to GBM's global credit portfolio risk as well as associated risk-adjusted profitability measures (Shareholder Value Added, Return on Equity).
  Utilized technologies including IBM DataStage 9.1, Python, PL/SQL, Linux, SQL Navigator, Putty, WinSCP, and Citrix.

- **Efficiency Management -** Leading Investment Bank of Switzerland: Aug 2012 – Apr 2013
  The original implementation of the MIW delivered a PeopleSoft based Supplier and Supplier Parent maintenance solution. The solution allows limited filtering capability, max visibility of 300 records at once and editing one record at a time.
  Utilized technologies including IBM DataStage 9.1(Designer, Director, Manager, and Administrator), PL/SQL, Oracle9i, HP-UNIX 11.11, Toad 9.0.1.8, Putty, FileZilla, and Citrix.

- **EPM - Core Financials - Leading Investment Bank of Switzerland: Dec 2011 – Aug 2012**
  MI Warehouse -MI Warehouse based in Princeton has the EPM data warehousing functionality (Multi Dimension Warehouse - MDW) using Princeton GL data and other Source systems.
  Utilized technologies including IBM Data Stage 8.5(Designer, Director, Manager, and Administrator), PL/SQL, Oracle9i, HP-UNIX 11.11, Toad 9.0.1.8, Putty, FileZilla, and Citrix.

- **Genesis-Retail Deposits - CITIBANK, N.A.: Jun 2011 – Dec 2011**
  The GENESIS program will provide a solution to support a common pool of contracts, positions and customer account balances across Citi on an enterprise basis to a common data model, including reference data, based upon Enterprise Data Standards and anchored to the financials.
  Utilized technologies including DataStage 9.1, AIX-UNIX, Teradata, Oracle10g, Putty, FileZilla, Citrix.

- **ITO ACES (Asia Consumer Enterprise Solution) - CITIBANK, N. A.: Apr 2011 – Jun 2011**
  Provide daily business progress across 15 AP countries, products, customer segments and sales hierarchy on daily basis through a set of key performance indicators – useful for analysing business trend & variations from plan numbers.
  Utilized technologies including AIX-UNIX; PL/SQL, RDBMS: Oracle10g, DataStage 8.5, Toad 9.0.1.8, Putty, FileZilla, and CitriX.

- **Obelix OBX / Assurancetourix ATX - SFR France: Jun 2009 – Apr 2011**
  The aim of this project is the optimization of data synchronization processes originating from ORIAN towards the CLARIFY database version SAFIR 1.5 and SAP RMCA. OBELIX and ASSURANCETOURIX are SSA (Sub-System Application) that interacts with several other SSA which used different data model on different infra-structure. Utilized technologies including Data Stage 7.5.2 (Manager, Designer, Director, Administrator), HP-UNIX 11.11, PL/SQL, Oracle9i, Toad 9.0.1.8, Putty, FileZilla, and VPN Client 4.8.01.

- **Neckermann DWH (KQ) - Neckermann, German: Aug 2007 – Jun 2009**
  Neckermann is one of the largest mail-order companies in Europe, with subsidiary companies in for example the Netherlands, Belgium, France, Denmark, Austria, and the East European countries. Neckermann CRM data warehouse is designed primarily for query and analysis in or der to improve mail order business.
  Utilized technologies including Data Stage 7.5.2 (Manager, Designer, Director, Administrator), HP-UNIX 11.11, PL/SQL, Oracle8i, Toad 9.0.1.8, Putty, FileZilla, and VPN Client 4.8.01

- **Ultimatix - Oracle Upgrade** - Tata Consultancy Services: Nov 2006 – Aug 2007
  Ultimatix- Oracle Upgrade is for the process of upgrading Oracle applications in Ultimatix from version 11.5.5 to
  11.5.10.2 for Tata Consultancy services and Extending Oracle Project Management using OA - Framework contains.
  Utilized technologies including HP-UNIX 11.11, PL/SQL, Java, Oracle Apps 11.5.10.2, PL/SQL Developer, Jdeveloper with OA extensions, Oracle Forms, Edit Plus

- **DVAT, (Delhi Value Added Tax)** - Delhi Sales Tax, NCT, New Delhi: Jun 2005 – Nov 2006
  DVAT is a web-based application, is being developed for Delhi Sales Tax as per VAT regime. This is an Intranet as well as Internet based application, facilitates dealer to apply online for Registration & Return filing through web.
  Utilized technologies including Java, JSP, Servlet, JDBC, Java Script, Windows 2000, Oracle 9i, Jdeveloper, SQL Developer

Awards & Honors

- **Innovation Excellence Award** – *Toyota Motor Engineering*: For contributions to AI-driven solutions in Connected Car Cloud.
- **Top Contributor Award** – *Moody's Analytics*: For successful delivery of market data integration and analytics pipelines.
- **Spot Recognition Award** – *State Street Global Advisors*: For seamless integration and automation of investment operations.

Onsite Experience

- **Bordeaux,** Atos Origin France (Nov 2007 – Feb 2008)
- **Paris & Rennes,** Atos Origin France (Sept 2009 – Nov 2009)
- **Groningen,** Atos Origin Netherlands B.V (Jun 2010 – Aug 2010)