**Rajat Verma**

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**Professional Summary**

Results-driven **Senior Data Scientist** with **12+ years of experience** in developing and deploying data-driven solutions across **FinTech, Healthcare, Retail, and Manufacturing** domains. Expertise in **machine learning, deep learning, predictive analytics, NLP, and big data processing**. Proven ability to **design end-to-end AI/ML pipelines**, optimize models, and drive **data-centric decision-making**. Adept in **Python, SQL, Spark, TensorFlow, AWS, and MLOps**.

**Skills & Competencies**

**Machine Learning & AI:**

* Supervised & Unsupervised Learning (Regression, Classification, Clustering)
* Deep Learning (CNNs, RNNs, LSTMs, Transformers)
* NLP (Text Classification, Named Entity Recognition, Sentiment Analysis)

**Big Data & Cloud:**

* Apache Spark, Hadoop, Databricks
* AWS (S3, Lambda, SageMaker, EMR), Azure ML, GCP AI Platform

**Programming & Data Processing:**

* Python, SQL, Scala, R
* Pandas, NumPy, Scikit-Learn, PyTorch, TensorFlow

**MLOps & Model Deployment:**

* Docker, Kubernetes, MLflow, Airflow, FastAPI, Flask

**Data Visualization & BI:**

* Power BI, Tableau, Matplotlib, Seaborn

**Professional Experience**

**Senior Data Scientist**

**XYZ FinTech Solutions, Bangalore, India** | *Jan 2020 – Present*  
📌 **Industry: Financial Services / FinTech**

* Developed an **AI-driven fraud detection system** using **Graph Neural Networks** and **real-time streaming analytics** (Kafka + Spark) to reduce fraudulent transactions by **35%**.
* Built a **predictive credit risk model** using **XGBoost and TensorFlow**, improving **loan default prediction accuracy** by **18%**.
* Designed a **customer segmentation engine** using **K-Means & DBSCAN**, leading to a **20% increase** in personalized financial product adoption.
* Led the **MLOps framework adoption**, reducing ML model deployment time from **weeks to days** using **MLflow, Kubernetes, and Docker**.

📌 **Key Achievements:**  
✅ Reduced **false positive fraud alerts** by **40%**, increasing customer trust.  
✅ Deployed **real-time transaction anomaly detection** on AWS SageMaker, reducing latency by **50%**.

**Lead Data Scientist**

**ABC Healthcare Analytics, Mumbai, India** | *July 2016 – Dec 2019*  
📌 **Industry: Healthcare / Pharmaceuticals**

* Developed a **patient readmission risk prediction model** for hospitals, reducing **avoidable readmissions by 22%**.
* Built an **AI-powered drug recommendation system** using **Graph Embeddings & BERT**, improving prescription accuracy by **30%**.
* Designed a **real-time disease outbreak prediction system** using **Hadoop, Spark, and LSTMs**, enabling **early detection of infectious disease patterns**.
* Integrated **FHIR-compliant data pipelines** for handling **electronic health records (EHRs)** in compliance with **HIPAA** regulations.

📌 **Key Achievements:**  
✅ Decreased **incorrect drug prescriptions** by **28%** using NLP-based medication analysis.  
✅ Improved **hospital resource allocation efficiency** by **15%** using predictive analytics.

**Data Scientist**

**PQR Retail & E-Commerce, Chennai, India** | *May 2012 – June 2016*  
📌 **Industry: Retail / E-Commerce**

* Developed a **demand forecasting system** using **LSTM and Prophet**, increasing inventory turnover by **18%**.
* Designed a **customer churn prediction model**, helping retain **15% more at-risk customers** through targeted marketing.
* Implemented a **dynamic pricing engine** based on **market trends and competitor data**, improving revenue by **12%**.

📌 **Key Achievements:**  
✅ Reduced **supply chain disruptions** by **22%** using AI-driven optimization.  
✅ Enhanced **customer lifetime value (CLV) prediction accuracy** by **25%**.

**Education**

🎓 **Bachelor of Technology (B.Tech) in Computer Science**  
**DEF University, Pune, India** | *2008 – 2012*

**Certifications**

* **AWS Certified Machine Learning – Specialty** (2023)
* **Google Professional Data Engineer** (2022)
* **TensorFlow Developer Certificate** (2021)
* **Certified Kubernetes Administrator (CKA)** (2021)

**Publications & Contributions**

📄 **Paper on "Graph Neural Networks for Fraud Detection"** - Published in **IEEE Transactions on AI & ML**  
🎤 Speaker at **India AI Summit 2023** on **"MLOps Best Practices"**  
📝 Technical Blog: **yourblog.com** (Writes about ML, AI, Big Data, and MLOps)

**Projects & Open-Source Contributions**

🔹 **"Credit Card Fraud Detection Pipeline"**

* Designed an **end-to-end fraud detection system** using **Kafka, Spark, and Graph AI**, reducing transaction fraud losses by **30%**.
* Open-source implementation available at **GitHub.com/yourname/fraud-detection**.

🔹 **"Personalized Healthcare AI Assistant"**

* Built an **NLP-powered AI chatbot** using **Transformer models (BERT, GPT-4)** to assist doctors with medical diagnosis.
* Implemented on **GCP AI Platform with FastAPI for real-time response**.

**Technical Stack Overview**

✅ **Programming:** Python, R, SQL, Scala  
✅ **ML/DL Frameworks:** TensorFlow, PyTorch, Scikit-learn, XGBoost  
✅ **Big Data:** Spark, Hadoop, Databricks  
✅ **Cloud Platforms:** AWS (SageMaker, Lambda, S3), GCP AI, Azure ML  
✅ **MLOps:** MLflow, Kubeflow, Airflow, Docker, Kubernetes  
✅ **Data Viz & BI:** Power BI, Tableau, Matplotlib

**Additional Information**

🏆 **Awards:**

* "Best AI Solution of the Year 2023" at **FinTech India Awards**
* "Data Science Excellence Award" at **Healthcare AI Summit 2021**

🌎 **Languages:** English, Hindi