Sorav Bhatia

Senior Technical Analyst | Business Intelligence & Analytics Leader

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Summary

Seasoned Business Intelligence (BI) & Analytics Systems leader with over 12 years of experience architecting, developing, and optimizing complex, enterprise-level BI solutions. Deep expertise in predictive modeling, advanced machine learning (ML) techniques, and neural network architectures, including multi-layer neural networks with backpropagation, optimization methods, and advanced activation functions. Proficient in real-time data integration and transformation, driving strategic decision-making and operational efficiency. Hands-on experience managing cross-functional teams to deliver scalable BI systems and processes, with a strong focus on data governance and compliance. Seeking to leverage extensive technical expertise to lead data-driven initiatives at IEHP as BI & Analytics Systems Supervisor.

Key Skills

- **BI & Visualization Tools:** Power BI, Tableau, QlikView, MicroStrategy, Cognos, Business Objects, Looker

- **Data Engineering & Integration:** SQL Server, Hadoop, Netezza, Talend, DataStage, Apache Spark, Kafka, ETL

- **Advanced Analytics & Machine Learning:** Neural Networks (RNN, CNN, LSTM), Stacking, Backpropagation, Sigmoid, RELU, Optimization (Gradient Descent, Adam), Cross-Entropy Loss, Clustering, Regression, Decision Trees, Random Forests, Reinforcement Learning, Deep Learning (TensorFlow, PyTorch)

- **Automation Expertise:** Workflow Automation, Process Automation, SQL Stored Procedures, Task Scheduling (Windows Task Scheduler, Cron), Python Scripting, Automated Reporting Systems

- **Programming & Scripting:** Python (Pandas, NumPy, Scikit-learn, TensorFlow), SQL (T-SQL, PL/SQL), R, Java, Scala, Bash/Shell Scripting

- **Cloud Platforms & Big Data:** AWS (Redshift, S3, Lambda, EMR), Azure, GCP, Snowflake, Google BigQuery, Databricks

- **Data Management & Governance:** Master Data Management (MDM), Data Warehousing, Data Lake Architecture, Data Mining, Data Governance, GDPR, HIPAA

- **Neural Networks & Mathematical Concepts:** Multi-layer Neural Networks, Perceptron, Chain Rule, Gradient Descent, Partial Derivatives, Convergence Theorem, ML Data Transformation (One to Multidimensional Space)

- **Project Management & Leadership:** Agile, Scrum, Lean, PMP, Kanban, Team Development, Mentoring, Cross-Functional Collaboration, Stakeholder Management

- **Methodologies & Tools:** Data-Driven Decision-Making, A/B Testing, Predictive Analytics, Automation, DevOps, CI/CD, Git, Jenkins, Docker, Kubernetes

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Professional Experience

Senior Technical Analyst
AAH — Alameda, CA | Nov2021 - Present

Key Contributions & Achievements:

- **Advanced Machine Learning & Predictive Modeling:** Developed machine learning models using RNN and LSTM architectures to predict trends in authorization data, improving forecast accuracy by 35%. Implemented complex neural networks using backpropagation, cross-entropy loss, and optimization techniques to drive better business decision-making.

- **Automation of Manual Processes:** Spearheaded the automation of manual data workflows, reducing processing time by 50%. Developed automated reporting systems and workflow automation using Python, SQL, and task scheduling, leading to a significant reduction in manual effort by business teams.

- **Strategic BI Leadership:** Led the design and implementation of enterprise-level BI dashboards (EREX Authorization, Provider Analytics) using Python and SQL, enabling real-time, data-driven insights across departments, directly improving resource allocation and operational efficiency.

- **Data Integration & Security:** Built highly scalable data pipelines in SQL Server and integrated data from EREX, TruCare, HealthSuite, and CLAIMS systems, ensuring real-time data consistency and compliance with HIPAA regulations.

- **Cross-Functional Collaboration:** Collaborated with data analysts, business analysts, Quality Analysts, IT dev, and senior leadership to develop tailored BI solutions that improved operational performance by 30% and facilitated better cross-departmental communication.

- **Data Governance:** Implemented automated data validation processes, ensuring the accuracy and security of sensitive healthcare data while adhering to strict regulatory guidelines.

Lead Analyst

CenCal — Santa Barbara, CA | Nov 2016 - Nov 2021

Key Contributions & Achievements:

- **Enterprise Data Solutions & Neural Network Implementation:** Spearheaded the implementation of machine learning algorithms, including multi-layer perceptron neural networks, for provider data analysis. Optimized complex data workflows, automating manual processes and reducing data processing time by 40%.

- **ETL Optimization & Data Pipeline Design:** Designed and optimized ETL processes using Talend and Hadoop, ensuring the seamless integration of data between legacy and cloud-based systems, increasing data availability by 50%.

- **Data Quality Assurance & Testing:** Led rigorous testing protocols, including UAT and regression testing, to ensure high data quality and accuracy across various environments, including claims and provider services.

- **Cross-Functional Leadership:** Managed collaboration between multiple departments, including IT, finance, and operations, to design custom data models and automated reporting solutions that improved decision-making and reduced reporting times by 60%.

Business/Requirement Analyst

Molina Healthcare — Long Beach, CA | Mar 2013 - Nov 2016

Key Contributions & Achievements:

- **Automation of Reporting Systems:** Transformed manual member and provider reporting workflows by implementing automated solutions using SQL and SSRS, reducing reporting times by 30% and ensuring real-time data accuracy.

- **Data Integration & Compliance:** Developed robust data import/export pipelines using SQL and SSRS, ensuring compliance with HIPAA regulations and improving data consistency across member and provider data.

- **Process Optimization:** Managed UAT sessions to streamline member and provider data workflows, reducing data discrepancies by 30% and enhancing overall system accuracy.

Research Analyst

Dr. Elizabeth Abercrombie's LAB — Rutgers university, Newark NJ | Aug 2010 - Mar 2013

Key Contributions & Achievements:

- **Research:** Worked as RA on the research of Neuronal Activity Patterns & Circuit Dysfunction in Multiple Rodent Models of Huntington's Disease

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Education

Master of Science in Biomedical Engineering (Minor in Neuroscience)

NJIT/Rutgers University — Newark, New Jersey | 2011

- **GPA:** 3.869/4.0

Bachelor of Science in Biomedical Engineering

C.R.S.C.E. — Haryana, INDIA | 2008

- **Graduated with honors, GPA:** 8.25/10.00

Certifications & Training

- **MIT 6.036 Machine Learning Course** | 2021

- **Stanford CS 65 W: Data Analysis with Python** | 2023

- **Microsoft ML Course** | 2023

Key Projects

EREX Authorization Dashboard

Alliance

- Developed a sophisticated real-time authorization dashboard using **Python, SQL, and ML**, integrating data across multiple healthcare systems (EREX, TruCare, CLAIMS). Leveraged predictive analytics (RNN models) and neural networks to improve resource planning by 25%.

Provider Services Dashboard

Alliance

- Created a dynamic dashboard for call center operations, leveraging **Power BI** and **SQL** to provide real-time performance insights. Used advanced data transformation techniques and machine learning algorithms to improve operational metrics by 20%.

PCP Incentives Redesign & SB137 Provider Directory

CenCal

- Led a cross-functional team in redesigning the provider directory system, integrating legacy data with **SQL, T-SQL, and Oracle**. Applied neural network models to analyze multi-dimensional data, achieving state compliance and improving data accuracy by 35%.

Member/Provider Data Import & Reporting

Molina Healthcare

- Designed and implemented data import solutions for member and provider data, leveraging **SQL** and **SSRS** for streamlined reporting. Applied advanced data transformation techniques and ML algorithms, improving data integrity and reporting efficiency by 30%.

Awards & Recognition

- **Consistently received highest merit of 7 to 10% every year at Alliance for delivering high-impact BI solutions and advanced machine learning models that transformed reporting and decision-making processes.**