


ABHAY TRIPATHI

Data Scientist | Machine Learning Expert | Data Visualization | BI Architect

18+ Years of Experience | Python | Generative AI | Data Analytics | Data Visualization

Contact Information

 Email: abhay2201029@gmail.com

 Phone: +91-9163267519

 LinkedIn: www.linkedin.com/in/abhay-tripathi1

 Location: Ahmedabad, India

Professional Summary

- Accomplished and forward-thinking **Data Science & Machine Learning Leader** with **18+ years of experience** delivering transformative business outcomes through data innovation, intelligent automation, and AI-powered solutions.
- Expert in **Python, Generative AI, and Machine Learning**, with deep proficiency in data storytelling and visualization using **Tableau, Power BI, and Alteryx**.
- Experience in data analysis and visualization, specializing in Python-based tools including Matplotlib, Seaborn, Plotly, and Dash. Skilled at transforming complex datasets into compelling visual stories that drive strategic decisions.
- Designing and implementing end-to-end data and AI solutions across **cloud platforms (Azure, AWS)**. Proven expertise in **AI/ML model development, data engineering, real-time analytics**.
- Proven track of successfully executing end-to-end data strategies across **Finance, Healthcare, Retail, IT, Defence, Sports, Entertainment, Life Sciences, Automobile, and Chemical** industries along with **AI-driven insights, predictive models, and automation solutions** to optimize business performance.
- Adept at leading cross-functional teams, modernizing legacy systems, and driving enterprise-wide digital transformation using tools like **Databricks, Azure Data Factory (ADF), Synapse, and Power BI**.
- Skilled in leading multi-disciplinary teams, managing high-impact projects, and integrating tools like **Salesforce, HubSpot, Zoho, IBM Maximo, JIRA, and Cognos** into enterprise data ecosystems.

Core Competencies

- **Data Science & ML:** Supervised/Unsupervised Learning, NLP, Computer Vision, Deep Learning, Forecasting, Recommendation Engines
- **Programming & Analytics:** Python (Pandas, NumPy, Scikit-learn, PyTorch & Advanced Libraries), SQL
- **Gen AI** (LLMs, Prompt Engineering, OpenAI GPT, LangChain, LLM fine-tuning, RAG, Hugging Face)
- **Data Visualization & BI Tools:** Tableau, Power BI, Power BI Service, Zoho Analytics, BIRT, IBM Cognos, Python-Matplotlib, Seaborn, Plotly, Dash, Plotly Express, Bokeh
- **Web-Based Dashboards:** Dash, Flask, Streamlit
- **Data Modelling:** Star Schema, Snowflake Schema, DAX, Power Query
- **ETL/ELT/Data Prep:** Alteryx, Power Query, Tableau Prep, Data Stage, ADF, Data Wrangling, Pipelines
- **Enterprise Tools:** Salesforce, Zoho CRM, HubSpot, JIRA, IBM Maximo, Confluence
- **Cloud Platforms/Tools:** Azure (ADF, Synapse, Data Lake), AWS (S3, Glue, EMR) GCP, Snowflake
- **CRM & Project Management:** Salesforce, HubSpot, Zoho, JIRA, DevOps
- **Enterprise & Industrial Tools:** **IBM Maximo** (Asset Management Analytics)
- **Architecture:** Microservices, Event-Driven Architecture, Data Mesh

Professional Experience

Principal Consultant | AI Consultant | Lead Architect

Freelance / Consulting/ Contract

Hybrid | Feb23 – Present

Led diverse, high-impact data initiatives for clients in **finance, healthcare, retail, sports, and entertainment**. Delivered cutting-edge solutions including predictive models, automated analytics platforms, and Gen AI applications.

- Developed fraud detection systems for financial clients using Random Forest, XGBoost, and anomaly detection frameworks.
- Deployed dashboards in Tableau and automated alerts with Alteryx. Developed 50+ interactive Tableau dashboards for sales, marketing, and operations teams, increasing stakeholder visibility by 70%.
- Designed and deployed 60+ interactive Power BI dashboards using live and imported data sources, improving decision-making across sales and finance.
- Managed Power BI Report Server infrastructure, ensuring secure, on-premises report delivery with role-level security and audit logging.
- Built Gen AI-based content recommendation and auto-generation engines for entertainment platforms using GPT models and LangChain pipelines.
- Applied NLP for sentiment analysis and customer insights for global retail brands using custom-trained BERT models.
- Led AI-powered patient risk prediction project in healthcare; improved clinical decision support accuracy by 30%.
- Created predictive maintenance models for defense and automotive clients integrated with IBM Maximo and BIRT reports.
- Built cloud-based data lakes and warehouse integrations for high-volume data pipelines on GCP and Snowflake.
- Designed Power BI dashboards to visualize sales KPIs and customer journeys from Zoho and Salesforce CRM systems.
- Designed and implemented AI-powered anomaly detection and forecasting for financial data using Azure ML, Databricks, and Power BI.
- Architected and deployed ADF pipelines to orchestrate data ingestion from SAP, Salesforce, and on-prem systems into Azure Data Lake.
- Oversaw end-to-end ETL and reporting architecture using Alteryx and Tableau for life science division's clinical trial data.
- Trained and mentored a team of 100+ data analysts, fostering a data-literate culture across departments.
- Optimized marketing campaigns (Entertainment & Sports) using clustering algorithms.

Architect / SME /Associate Director/ Solution Architect

Company LTI

Client: Confidential Banking Client

Period: Jan 22 – Oct 22

Responsibilities

- Requirement gathering, identify the complexity task and set the priority of the task.
- Worked with stakeholders and users to analyze and validate business requirements.
- Data Collection and Management: Collect, clean, and organize large datasets from various sources

- Developed complex workflow using Alteryx and deploy hyper file on Tableau server.
- Performed installation, migration and upgrade of Alteryx Servers under High Availability scenario.
- Manage the team, team members work and help team on complex queries, task and kind of logic.
- Developed high priority and sensitive dashboard for senior Management using Tableau, Power BI.
- Implemented row-level security and performance optimization for Tableau, Power BI dashboards.
- Developed advanced segmentation and personalization AI models using Python, Scikit-learn, and Azure Databricks.
- Implemented **Data Lakehouse architecture** with Delta Lake, enabling unified data warehousing and ML workflows.
- Identified process and system performance improvement areas and proposed optimized solution followed by best practise.
- Preparation and maintenance of various risk reports and analysis. Coordination of reporting process (taking care of new reporting needs and issue solving).
- Weekly basis client meeting to show case weekly work and track project status.
- Developed **predictive models for fraud detection (Finance)**.
- Built **interactive dashboards (Tableau/Power BI)** for executive decision-making.
- Created complex DAX measures and calculated columns for advanced analytics and KPIs.
- Collaborated with data engineering teams to develop optimized data models and implement refresh scheduling.
- Led governance initiatives including naming conventions, documentation, and data dictionary.
- Integrated **Salesforce & HubSpot** data for **customer segmentation** and **churn prediction**.
- Designed Zoho-based reporting systems to track sales performance, delivering real-time insights to leadership teams.
- Conducted statistical analysis and data cleansing, supporting strategic initiatives across multiple industries.

Principal Technical Consultant / Lead Developer / Data Analyst

Company: Stefanini Group

Client: Belden

Period: Jun 21 – Jan 22

- Design interactive dashboards using Tableau and Power BI to visualize KPIs, enabling executive decision-making for retail and entertainment clients.
- Created row-level and object-level security in Power BI models to support multi-department reporting.
- Trained business users on self-service reporting and built reusable templates for cross-functional teams.
- Implement machine learning algorithms (e.g., Random Forest, LSTM) to forecast sales trends, reducing inventory costs by 15% in the automotive industry.
- Collaborate with cross-functional teams using JIRA to manage workflows and deliver projects ahead of schedule.
- Involved in streamlining the processes for design, development and testing of case study scenarios for the project that would minimize the defects and ensure high quality delivery by creating design/review templates, checklists and documents.
- Having work experience for Analysis, design, Requirement gathering, preparing SRS.
- Worked on ETL and ELT process to clean, extract and filter data based on business requirement using data preparation tools like Alteryx.

- Identified data flow and nature of data based on that designed and developed automated reporting solutions.
- Delivery & Planning—Optimized time estimates and progress monitoring against detailed project plan.
- Report import/export through tool.
- Designing and Development of the Tableau Dashboards.
- Performed day to day administration of Alteryx Servers in Windows environment.
- Manage sites and projects/ collections.

Company: HSBC POLAND

Client: HSBC POLAND

Period: Jan 18 – Jun 21

Role: Risk Analytics Consultant / COGNOS SME / BI Manager / SLOD/ Data Analyst/ Business Analyst

Responsibilities

- Second line of defence Risk Officer - Risk and Control Self-Assessment (RCSA) work stream lead for Corporate & Treasury division, as part of a focused program to implement a Business Control Framework supported by an industry leading Enterprise Risk Management system, IBM Open Pages.
- Designed KPI dashboards and visual analytics using Tableau for financial and HR reporting.
- Built complex Alteryx workflows involving joins, parsing, macros, and predictive analytics tools.
- Supported ad hoc data requests and built reusable data prep templates for analysts.
- Trained 400+ business users on Tableau usage and best practices.
- Built and deployed machine learning models using Python and TensorFlow to analyze customer behavior in financial risk and model findings, increasing conversion rates by 18%.
- Built **custom ML solutions** for fraud detection and risk scoring for banking clients.
- Migrated legacy ETL to cloud-native ADF pipelines for multiple clients.
- Developed 200+ Custom & Complex reports using Cognos, Tableau, Power BI, Python which are related to Model, Review & Findings, data quality and other parameters.
- Involved in streamlining the processes for design, development and testing of case study scenarios for the project that would minimize the defects and ensure high quality delivery by creating design/review templates, checklists and documents.
- Having work experience for Analysis, design, Requirement gathering, preparing SRS.
- Delivery & Planning—Optimized time estimates and progress monitoring against detailed project plan.
- Designed and developed reports, dashboards according to roles, locations and demand using Tableau, Power BI, Cognos.
- Specific set of report developed in Tableau using GMIS inventory data.
- Data visuals in Python using matplotlib and seaborn for legacy systems data.
- Performed installation, migration and upgrade of Alteryx Servers under High Availability scenario Perform performance analysis of existing Alteryx Servers and make Best Practice recommendations.
- Perform day to day administration of Alteryx Servers in Windows environment.
- Configure and manage project permissions. Configure and maintain Active Directory integration with Alteryx Server.
- Handled multiple projects and delivered in time meeting all best practices and data quality.
- Conducted statistical analysis and data cleansing, supporting strategic initiatives across multiple industries vertical.
- Created weekly/monthly reports using Python scripts and Matplotlib/Seaborn charts.
- Automated ETL processes using Pandas and integrated with Excel-based reporting.

Company: IBM Client Innovation Centre Europe, Poland
Client: IBM Client Innovation Centre Europe, Poland
Role: Technical Lead/L3 Support/ Technical Architect
Period: May 16- Dec 17

This project involves domain of Banking Industry. This includes ticketing, asset management for IT, service catalog, offerings. This is development project as well as maintenance project.

Responsibilities:

- Involved in development and testing of case study scenarios for the project that would minimize the defects and ensure high quality delivery by creating design/review templates, checklists and documents.
- Having work experience for Analysis, design, Requirement gathering, preparing SRS.
- Delivery & Planning—Optimized time estimates and progress monitoring against detailed project plan.
- Data import/export through MIF.
- Integration with other legacy system through java coding using web services.
- Designing and Development of the Eclipse BIRT Reports and Cognos reports.
- Utilized IBM Maximo for asset management analytics in the defense sector, improving maintenance schedules and reducing downtime by 22%.
- Performed exploratory data analysis using Python and SQL to identify trends in financial and healthcare datasets, informing business strategies.

Environment: Maximo, SCCD 7.5, Cognos, BIRT, Python, SQL, Tableau and others legacy systems.

Company: WIPRO, INDIA
Client: CONFIDENTAIL Defence Project
Role: Project Lead
Period: Jan 15- March 16 & Jun 13- Dec 13

This project involves the maintenance of Aircraft across the country. This includes asset management, asset configuration, transportation, scheduling, and calibration. This is development project and my profile as a Project Lead.

Responsibilities:

- Involved in streamlining the processes for design, development and testing of case study scenarios for the pilot project that would minimize the defects and ensure high quality delivery by creating design/review templates, checklists and documents.
- Involved in the Analysis, design, Requirement gathering, preparing BRS documents and SRS.
- Involved in Delivery & Planning—Optimized time estimates and progress monitoring against detailed project plan.
- **Maximo 7.5** installation, configuration with add-ons like scheduler, calibration, transportation and ACM.
- Data import/export through MIF.
- Responsible for Designing and Development of the Eclipse BIRT Reports as well as Cognos Report (600 report approx. at the initial level).

- **Cognos** reports development, Dashboard designing using report studio, workspace advanced, and framework manager.

Environment: Maximo 7.5 EAM, ACM, Transportation, Calibration, BIRT, COGNOS and others legacy systems.

Company: Tech Mahindra, INDIA

Client: Ford India

Role: Technical Lead, Reporting Manager

Period: Dec 13- Dec 14

This project involves domain of Automobile industry. This includes asset management, service request. This is development project.

Responsibilities:

- Involved development and testing of case study scenarios for the project that would minimize the defects and ensure high quality delivery by creating design/review templates, checklists and documents.
- Having work experience for Analysis, design, Requirement gathering, preparing SRS.
- Delivery & Planning—Optimized time estimates and progress monitoring against detailed project plan.
- Data import/export through MIF.
- Integration with other legacy system through java coding using web services.
- Designing and Development of the Eclipse BIRT Reports.

Key Projects

- **Asset Management System (Defense)**
 - Tools: Python, TensorFlow, Eclipse BIRT (Business Intelligence Reporting Tool), IBM Cognos Analytics, IBM Maximo, Power BI
 - **Maximo Modules:** Work Management, Asset Management, Inventory, Purchasing, Preventive Maintenance
 - Reduced manual report creation effort by 50% through reusable BIRT templates and Cognos dashboards.
 - Supported Maximo upgrade (from 7.5 to 7.6), ensuring all reports were migrated and tested successfully.
- **AI-Driven Sales Forecasting Platform** – Increased forecast accuracy by 35% using time-series models on Azure ML & Databricks.
- **ADF + Databricks Real-Time Analytics** – Delivered sub-minute latency insights for an IoT manufacturing setup.
- **Customer Segmentation Model (Retail)**
 - Tools: Python, Scikit-learn, Salesforce, Tableau
 - Outcome: Developed clustering algorithms to segment customers, increasing marketing campaign effectiveness by 30%.
- **Drug Discovery Simulation (Life Sciences)**
 - Tools: Generative AI, Python, Alteryx, BIRT
 - Outcome: Created a generative model to simulate molecular interactions, cutting R&D costs by 20%.
- **Player Performance Analytics (Sports)**
 - Tools: Python, Power BI, Cognos

- Outcome: Designed a real-time analytics platform to track player stats, improving team strategy and fan engagement.
- **Fraud Detection System (Finance)**
 - Tools: Python, Tableau, HubSpot
 - Outcome: Implemented an anomaly detection model, reducing fraudulent transactions by 15%.
- **Sales Performance Dashboard:**
 - Designed a Tableau, Power BI and Cognos Analytics dashboard used by 100+ sales reps to track targets and quotas in real-time.
- **Data Quality Framework:**
 - Developed Alteryx workflows to perform validations and cleansing checks across multiple data pipelines.
- **Enterprise Finance Dashboard:**
 - Integrated data from ERP and budgeting tools to provide real-time spend vs. budget tracking for finance teams.

Education:

Bachelors in Technology (Computer Science Engineering) 2006 Pass out from Maharana Pratap Engineering College, Kanpur, UP Technical University, Lucknow, India.

Certifications:

