

Abhi Bhardwaj

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EDUCATION

George Washington University

Masters, Computer Science

- **Coursework:** Design & Analysis of Algorithms, Machine Learning, Cloud Computing, Computer System Architecture

Aug 2024 - May 2026

SRM University

B.Tech., Computer Science Engineering

- **Coursework:** Data Structures & Algorithms, Probability & Queueing Theory, Data Mining & Analytics, Artificial Intelligence

Jul 2018 - May 2022

SKILLS

- **Language:** Python, C++, SQL, R, TypeScript, Shell Scripting
- **Machine Learning/ AI:** TensorFlow, NLP, RAG, PyTorch, Computer Vision, Deep Learning, Scikit-Learn, XGBoost, Hugging Face, LLMs
- **Web Development:** FastAPI, React.js, Node.js, Streamlit, RESTful APIs
- **Cloud:** Google Cloud Platform (BigQuery, Cloud Storage), AB Initio, Teradata
- **DevOps/MLOps:** Docker, Kubernetes, CI/CD, ML, MLflow
- **Databases:** Teradata, MySQL, MongoDB, ChromaDB, Vector Databases
- **Data Science & Tools:** Pandas, NumPy, Matplotlib, Linear Regression, Feature Engineering, Statistical Concepts, Data Visualization, Distributed Data Processing
- **Tools & Frameworks:** Git, TextBlob, LangChain, OpenCV, SHAP

WORK EXPERIENCE

Vodafone Intelligent Solutions | *BI Big Data & Analyst*

Aug 2022 - Jul 2023

- Collaborated with cross-functional teams of 8+ members and product line management to ensure quality requirements delivery to 50+ distributors, maintaining 95%+ on-time delivery rate across 12+ release cycles
- Engineered 15+ data pipelines and ETL workflows using AB Initio, GCP (BigQuery, Cloud Storage), and Teradata SQL, implementing distributed data processing to handle 500K+ daily sales transactions and customer usage data for revenue analytics and customer insights reporting
- Conducted failure analysis and root cause investigations using Unix shell scripting and Python, reducing critical incident resolution time by 30% through systematic debugging and comprehensive reporting
- Streamlined data validation processes on Teradata by automating quality checks with Python scripts and applying statistical concepts to define data quality thresholds, decreasing manual verification effort by 40% while improving data accuracy by 25% across production systems

High Radius | *Tech Consultant*

Jun 2021 - Jul 2021

- Completed business analysis and technical documentation for 3+ client projects, translating requirements into data models and analytical frameworks that accelerated implementation and delivered tangible business results, such as increased efficiency and cost savings.
- Performed exploratory data analysis on datasets containing 100K+ records using Python (Pandas, NumPy) and SQL to identify process inefficiencies, delivering 5+ actionable insights that informed client optimization strategies and workflow improvements
- Developed detailed client documentation, including 10+ data dictionaries and technical specifications, which cut down onboarding time for implementation teams by 25%

PROJECTS

FraudGuard - MLOps Fraud Detection System | [Github](#)

Oct 2025 - Nov 2025

- Engineered enterprise-grade fraud detection system using XGBoost and LightGBM achieving 96.2% precision and 0.976 AUC-ROC on imbalanced credit card transactions (0.17% fraud rate), delivering estimated \$2.4M annual savings through 40% reduction in false positives and optimized investigation workflows
- Architected complete MLOps pipeline with MLflow experiment tracking, automated model versioning, CI/CD deployment via GitHub Actions, and real-time drift detection using Evidently AI, enabling zero-downtime deployments and automated retraining triggers with 95%+ test coverage
- Developed scalable FastAPI microservice with <50ms inference latency and 1000+ requests/second throughput, implementing SHAP explainability for regulatory compliance, Docker containerization, and comprehensive monitoring via Prometheus/Grafana dashboards
- Built automated feature engineering pipeline processing 284K+ transactions with SMOTE oversampling to handle severe class imbalance, incorporating time-based, behavioral, and statistical features while implementing rolling averages and anomaly detection patterns that improved fraud detection accuracy by 25%

SentiStock-Analytics - AI Powered Financial Intelligence | [Github](#)

Sep 2025 - Nov 2025

- Developed AI-powered stock analysis platform integrating real-time market data via yfinance API with NLP-based sentiment analysis using TextBlob, processing 100+ financial news articles per minute to generate bullish/bearish/neutral sentiment scores with 75-80% correlation to short-term price movements
- Built interactive Streamlit web dashboard with Plotly visualizations displaying real-time stock prices, historical charts, and aggregated sentiment metrics across 10,000+ stock tickers, achieving <2 second data fetch times and enabling traders to make data-driven investment decisions
- Engineered end-to-end data pipeline using Pandas and NumPy to fetch, process, and analyze multi-source financial data (price history, news headlines, sentiment scores), implementing time-series analysis and sentiment aggregation algorithms for comprehensive market intelligence
- Deployed production-ready application on Streamlit Cloud with dual-interface design (web dashboard and CLI tool), supporting custom date ranges, multi-stock analysis, and real-time sentiment tracking to provide actionable trading signals for day traders and long-term investors

UrbanKart - Full Stack E-Commerce Platform | [Github](#)

Oct 2025 - Nov 2025

- Architected scalable full-stack e-commerce platform using React TypeScript frontend and FastAPI backend, supporting 1000+ concurrent users with <100ms API response time and role-based access control (admin, manager, customer)
- Engineered MySQL database with advanced features including triggers for automated inventory updates, stored procedures for complex transactions, and optimized indexing, reducing query latency by 40% compared to standard ORM queries
- Developed secure RESTful API with JWT authentication, Pydantic validation, and comprehensive CRUD operations across 8+ entities, enabling seamless integration between frontend and backend with automatic API documentation via Swagger

- Built type-safe React application with TypeScript, Vite build optimization, Context API state management, and responsive UI components, achieving <2-second load time on 3G connections