

EDUCATION

Master of Applied Sciences in Data Science, Illinois Institute of Technology, Chicago, IL

Aug 2023 – May 2025

Main Courses: Time Series Forecasting, NLP, Applied Statistical / Regression Analysis, Generative AI, LLM, ML, Project Management, Algorithms

EXPERIENCE

Enterprise Delivery Governance Analyst, Options Clearing Corporation (OCC), Chicago.

May 2024 – May 2025

- Developed data processing pipelines using SQL and Python (Hugging Face Transformers, Lang Chain, OpenAI API) for data ingestion, cleansing, and feature engineering across large-scale, multi-source datasets with LLM Modules.
- Designed and deployed scalable machine learning models and statistical algorithms using Cognos, SAS, Tableau, Excel, and Google Cloud to detect anomalous behavior patterns, data manipulation and analysis and improve fraud and risk analytics.
- Spearheaded and performed access equipping governance by associating with several stakeholders, including application owners, security teams and external vendors, ensuring strict adherence to RBAC (Role-Based Access Control) policies and internal controls.
- Served and acted as a main bridge between business holders and IT client's injection vulnerabilities and mitigation strategies, translating complex access requirements into actionable workflows within ServiceNow and managing tasks via Jira.
- Supported regulatory responsibility and internal audits by performing thorough analysis of user permissions, roles, and access rights, frequently referencing Active Directory structures and ensuring documentation met core Identity and Access Management principles.

Custom Software Engineer, Accenture Solutions, India

Sep 2022 – Sep 2023

- Implemented automated data workflows using Python and SQL for backend data quality validation; collaborated with DevOps to deploy models in production using CI/CD pipelines and AWS-based infrastructure and ETL tools (Azure Data Factory, AWS Glue, Informatica, Talend, IBM DataStage, etc.), and/or database platforms (Snowflake, Redshift, Azure Synapse, or Oracle).
- Processed and analyzed large-scale structured Retrieval-Augmented Generation (RAG) architectures and unstructured data using Spark, Databricks, Kafka, Kinesis, Hadoop, and/or Lambda, enabling faster detection of fraud patterns and risk signals.
- Communicated effectively with internal and client-facing teams to troubleshoot integration effects and assure secure, built C++ / Python modules for secure, low-latency backend trading application deployments and performed system administration tasks on both Linux/Unix environments.
- Partnered and added directly with audit and compliance teams to track user lifecycle changes and document proof for official reviews, assuring consistency around environments. Automated routine monitoring and troubleshooting using shell and PowerShell scripting.

Analyst, HCL Technologies, India

Mar 2020 – May 2022

- Solved and served as L2 technical support, applied excellent troubleshooting and reasonable skills to resolve complex, elevated access and application issues for a key client portfolio, degraded average Mean Time to Resolution (MTTR) by 22%.
- Interacted closely with business stakeholders to gather detailed access requirements, map them to system roles (e.g., Salesforce), and implemented and conserved custom provisioning and deployment workflows. Deployed data pipelines and analytics workloads on AWS and Azure cloud platforms.
- Developed and maintained extensive internal knowledge base reports, empowering the L1 support team and leading to a 15% deduction in issue escalation rate to the L2 team. Built interactive using data visualization tools (Tableau, Power BI, Looker) dashboards and implemented C# scripts for system-level automation and reporting. Automated main metric reporting using SQL and Excel VBA to trace client-reported tides and support SLAs.

PROJECT

Data Scientist, Center for Neighborhood Technology, Chicago

Sep 2023 – May 2024

- Engineered a hybrid time-series forecasting pipeline LLM evaluation frameworks, including defining applying relevant metrics and integrating both classical statistical models (e.g., ARIMA, GARCH (1,1) for volatility modeling) Deep Learning models (LSTM/Bi-LSTM) to predict Bitcoin price direction and volatility regimes. Achieved a directional prediction accuracy of 61.5% for next-day returns, significantly exceeding the random baseline of 50%.
- Incorporated exogenous features (e.g., on-chain metrics, Google Trends/Social Sentiment, VIX) to enhance model robustness, demonstrating that a multi-factor approach reduced the final Root Mean Square Error (RMSE) of the price forecast by 14% compared to a univariate model.
- Conducted rigorous stationarity and autocorrelation testing (ADF, KPSS) and employed techniques like log transformation and differencing to ensure the data met the assumptions required for the chosen econometric models.

SKILLS

Programming / Analytics: No SQL, MySQL, R, Python (Pandas, NumPy, SciPy, Scikit-Learn, TensorFlow, PyTorch, Keras), Power BI, Tableau, Alteryx, Quantitative / ML / Data Science: XGBoost, Hypothesis Testing, Machine Learning, Risk Modeling, Mifid, EMIR, SFTR, CFTC, TRACE

Data Engineering / Cloud: Snowflake, AWS (EC2, S3, EMR, Redshift), Microsoft Azure, Google Cloud Platform (GCP), Databricks, Data Pipeline Data Cleaning, ETL Pipelines, Data Wrangling, AWS EMR, Hadoop, Spark, Cassandra, MongoDB

Infrastructure / DevOps: Linux, Windows Server, Jenkins, Git, Docker, Kubernetes, CI/CD, Model Maintenance, Management Reporting

Model Development: Fraud Detection, Risk Modeling, Identity Verification, Feature Engineering, Model Evaluation, Deployment, Monitoring

Data Management / Warehousing: Enterprise Data Warehouse (EDW), Data Quality, Governance & Access Controls (RBAC, IAM), Active Directory,

Statistical / Reporting Tools: Time Series Analysis (ARIMA, GARCH), Anomaly Detection, Risk Modeling, R Shiny Application Support

Collaboration / Tools: Jira, Confluence, SharePoint, MS Office Suite (Excel, PowerPoint, Word), Agile & Kanban

Governance / Reporting: Delivery Governance Frameworks, SEC/CFTC Compliance, Stakeholder Reporting, Executive Communication

VOLUNTEER CONTRIBUTION

Software Developer, Rebecca Everlene Trust Company, Chicago

May 2025 – Present

- Delivered and deployed custom integration result to attend data between Salesforce CRM & Monday.com via API standpoints (RESTful/SOAP).
- Customized the Client requirement project pipeline course, reduced data entry time by 30% and improving real-time project tracing accuracy.