Nigel Story

Full-Stack Machine Learning and AI | 🌐: nigelstory.com

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Professional Summary

Experienced Machine Learning Engineer and Full-Stack Data Scientist with a proven track record of leadership and value-added innovation. Skilled at end-to-end ML system design and implementation, engineering robust systems from the ground up.

Key Accomplishments:
- o Designed and implemented analytical architectures for multiple businesses starting from green field -- from creating and setting up servers, to database creation and administration, to data engineering and deployment of ML applications.
- o Engineered ML systems with custom training and inference pipelines, along with building robust databases and backend to support long-term monitoring and observability of models and data distributions.
- o Earned trust with clients and stakeholders through effective communication, building strong relationships and garnering excitement and new business opportunities.

Experience

Data Scientist, MLE Technical Lead　　　　　　　　　　　　　　　　**October 2022 - Present**

Tennessee Valley Authority　　　　　　　　　　　　　　　　　　*Chapel Hill, NC (Remote)*
- o Engaged deeply with client business partners, leading project intake and knowledge gathering sessions, learning the ins and outs of their business, and presenting proofs-of-concept and scopes of work that fit their needs.
- o Architecting and delivering end-to-end ML solutions, from ideation and data gathering to model training and deployment/monitoring.
- o Led AI workstream of major cross-functional effort to reduce our application footprint using custom tree-based clustering method. This project is estimated to decrease total cost of ownership by ~$150M.
- o Designed and deployed large-scale NLP system to process condition reports, decreasing workload of power generation fleet by over 4,000+ hours annually.
- o Designed and implemented custom MLOps architecture to track throughput and performance of the condition report application, setting up the servers, data pipelines, databases, and front-end.
- o Engineered Graph ML anomaly detection system in Databricks to detect shifts in large infrastructure based on streaming sensor mesh, averting catastrophic failures.
- o Reduced Databricks Spark pipeline runtimes by 80% on big data (100GB/day) workloads by implementing caching strategies and optimizing join operations, improving ETL efficiency for downstream ML models.
- o Developed Composite AI (LLM + ML) contract classification system for Financial Operations, saving an estimated 3,000 hours annually. Deployed via REST API and Flask web application.
- o Partnered with Cybersecurity to advise on engineering design of Agentic RAG system, proposing and revising candidate system designs.
- o Pioneered enterprise's first RAG application deployment, providing a Python Flask-based Q&A interface for employees to search and interact with standard procedure documentation.
- o Developed and taught official enterprise trainings in AI Ethics, Generative AI, and SQL. Regularly held job-shadows and career mentoring for interns.

Owner, Data Engineering Consultant　　　　　　　　　　　　　　　**May 2021 – Present**

Nigel Story Consulting　　　　　　　　　　　　　　　　　　　*Chapel Hill, NC (Remote)*
- o Engaged with small/medium-sized businesses to help them gain access to advanced analytics applications.
- o Created analytical infrastructure for an online retailer, going from system architecture proposals and pricing estimates to full production implementation of back-end server, databases, predictive analytics, and dashboards using AWS EC2, RDS, and QuickSight.
- o Engineered data pipelines to combine data from Meta Ads API and Shopify using GraphQL sources and RDS MySQL sinks.
- o Assisted other retailer with migration of ERP systems from Counterpoint to NetSuite, including data remapping and entity resolution.

Data Science Team Lead   December 2021 – September 2022

ThriveDX   *Chapel Hill, NC (Remote)*
- o   Led team of 3 data scientists, determining prioritization of projects, hosting project intake meetings, and organizing "road shows" to spread awareness of the team's capabilities.
- o   Led cross-functional team in implementation of AWS S3 data lake solution, implementing bronze, silver, and gold architecture for data quality.
- o   Owned data integration efforts of subsumed partner company, creating a uniform source of truth for shared data.
- o   Developed student attrition ML system, exposing over $2M of risked revenue per cohort cycle. Deployed as batch-prediction on EC2 instance with RDS MySQL application database.
- o   Architected and deployed job recommender system, utilizing NLP to match graduates with employers. Scraped online job boards into database, daily batch recommendation for students, recommendations written to Career Services database.

Full-Stack Data Scientist   May 2021 – December 2021

IntraHealth International   *Chapel Hill, NC*
- o   Architected Azure EDW solution from the ground up, integrating global data from several countries into single sources of truth.
- o   Built Power BI reports to be presented to government programs as requests for funding, including USAID and PEPFAR.
- o   Engineered data pipelines to scrape thousands of reoccurring Excel reports on maternal and child health stored in One Drive and compile into database.
- o   Developed OCR system to read handwritten patient records and convert them into usable data sets.

Staff Data Analyst, Machine Learning & Data Engineering   February 2018 – May 2021

Cos Bar Retail, LLC   *Los Angeles, CA*
- o   Led database architecture and data engineering efforts for Cross-Platform Integration Project, combining data from hosted services into single reporting database.
- o   Built back-office analytics website from the ground up, using LAMP stack (Linux, Apache, MySQL, PHP). Populated with outputs from ML systems along with streaming analytics.
- o   Developed Product Recommendation System, improving sales associates' ability to actively sell. Deployed as web application integrated with ERP.
- o   Implemented new forecasting methods driving better decision making in finance and inventory planning, calculated on the fly during report downloads.

Computational Skills

Programming Languages
Python, R, SQL, JavaScript, PHP, BASH (Linux/Unix), HTML/CSS, NoSQL (GraphQL, MongoDB)

Technologies
Sci-Kit Learn, PyTorch, TensorFlow, Keras, PySpark, LangChain, Azure, AWS, Dataiku, Flask, Power BI, Tableau

Education

B.S. Statistics and Analytics / *University of North Carolina at Chapel Hill*   *Chapel Hill, NC*

Certificates

Machine Learning Engineering for Production / *Coursera Specialization*   *Credential ID: 8ZVZ-+URV4RAK3*

Advanced Data Science with IBM | *Coursera Specialization*   *Credential ID: F7CZRNKXZDHH*