

NICHOLAS J NORTON MBA, MSDA

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I specialize in bridging the gap between complex business logic and high-performance machine learning systems. Currently, I lead the development of enterprise-scale assortment and demand forecasting models at O'Reilly Auto Parts, managing the end-to-end ML lifecycle on Google Cloud Platform.

EDUCATION

University Of Missouri <i>Master of Science in Data Science and Analytics</i>	<i>May 2022</i>
American University, Kogod School of Business <i>Master of Business Administration</i>	<i>May 2020</i>
Drury University <i>Bachelor of Arts, American Government and Politics</i>	<i>May 2012</i>

TECHNICAL SKILLS

- Language Proficiency – SQL, R, & Python
- Google Cloud Platform – Gemini, BQ, Dataform, VertexAI Workbench, VertexAI Pipelines, MLOps
- Certifications – Google Data Analytics (Certification link [here](#))

WORK EXPERIENCE

O'Reilly Auto Parts – Springfield, Missouri

Data Scientist | Specialized in Scalable ML Pipelines & Demand Forecasting *Sep 2022 – Present*

- **Scalable ML Orchestration:** Architected multi-model GCP Vertex AI pipelines that automate assortment selection and transaction propensity for 200k+ SKUs across hundreds of locations.
- **System Optimization:** Transformed legacy forecasting processes, achieving a 99.52% reduction in runtime (from 21 hours to 5 minutes) by migrating complex Excel-based logic to cloud-native Python and BigQuery environments.
- **Hybrid Modeling:** Designed a sophisticated forecasting framework utilizing ARIMA and transaction propensity models to optimize inventory depth and product availability, directly impacting millions in potential sales and savings.
- **Full-Stack Data Engineering:** Streamlined data flows from 30+ sources, utilizing Dataform and Snowflake to deliver high-integrity, automated outputs for C-suite executive decision-making.

Data Analyst | Specialized in Operational Reporting & SQL Automation

Sep 2021 – Sep 2022

- **Reporting & Automation:** Developed SQL-driven reporting suites and automated dashboards to provide visibility into warehouse operations, streamlining data extraction for executive-level decision-making.

PROJECT WORK

Multimodal Narrative Intelligence Pipeline

- **Audio Engineering & Diarization:** Engineered a custom pipeline to process multi-channel Discord audio using OpenAI Whisper, implementing speaker identification and diarization to convert raw audio into structured scripts.
- **Contextual Script Synthesis:** Leveraged Gemini 1.5 Pro's long-context window to ingest extensive session scripts, utilizing advanced prompt engineering to generate consistent narrative recaps and stylized narrator scripts.
- **Voice Synthesis & Distribution:** Integrated ElevenLabs API with a custom-trained voice clone to automate the production of high-fidelity audio recaps, delivering a familiar narrative experience to players.
- **Process Automation:** Built the end-to-end workflow to handle the transition from unstructured audio data to polished, multi-format (text and audio) creative assets.

Example Output: [D&D Recap Ep.7](#)