Amanda LaForest

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SUMMARY

Lead AI/ML engineer fluent in multiple programming languages, creative problem-solving, data visualization, and data pipeline building. Maintains clear and accessible communication through all projects, abides by ethical data handling and modeling standards, and nurtures a passion for teaching and leading others. Excited to work for a fast-paced, AI-forward organization in the Denver area.

SKILLS

- **Tools:** Python, SQL, AWS, Databricks, Git, Bash, Excel, Tableau, QGIS, R, LateX, HTML, CSS
- **Topics:** AI/ML, Data Engineering, Natural-Language Processing, Deep Learning, Statistics, Data Visualization
- **Certifications:** Databricks Generative AI Engineer Associate, Databricks Data Engineer Associate   2024-2025
- **Awards:** INFORMS 2023 Poster Contest, *Mapping the Flow of Imports Through the E-Commerce Supply Chain*   2023
- **Author:** *Data Schema to Formalize Education R&D Using Natural-Language Processing,* published in IEEE   2021
- **Freelance Writing**: Writer for Medium's *Towards Data Science* publication, >100,000 views across articles   2020-2022

EXPERIENCE

<u>Booz Allen Hamilton</u>; Aurora, Colorado   Jan 2024 - Present
Lead AI/ML Engineer, Associate
Lead a team of data engineers, AI engineers, and data scientists within the FDA Data Modernization program. Serve as strategic AI advisor to executive leadership, delivering technical recommendations for enterprise-wide AI adoption. Oversee professional growth of six data science professionals in a managerial role and provide technical and professional mentorship.

- Led migration of enterprise-wide data warehousing modernization initiative processing 70TB of FDA regulatory data on a daily, quarterly, and annual basis from legacy Oracle on-prem servers to AWS GovCloud and Databricks Delta Lake Platform
- Architected key data ingestion validation workflows in Databricks using Python and PostgreSQL, decreasing manual deployment verification time by over 40 hours per monthly release by auto-flagging failures across 3,000+ tables
- Spearheaded development of comprehensive data dictionary handling 16,500+ columns across 1,500 tables, significantly reducing data ingestion errors and accelerating downstream modeling via automated validation rules and data type inference
- Established weekly data science learning sessions fostering cross-team collaboration and accelerating adoption of AI through topics such as federated learning, useful hallucinations in AI, quantum computing, and modern data engineering architectures

<u>Daybreak LLC</u>; McLean, Virginia
Senior Data Scientist   June 2022 - Dec 2023
Led a team of four data scientists within the FDA Center for Devices and Radiological Health Product Authentication Program. Synthesized eCommerce data using Python, SQL and Tableau to identify vulnerabilities threatening healthcare supply chain resiliency.

- Piloted anomaly detection initiative focused on identifying illegitimate products at FDA, guiding the project through its entire lifecycle, from initial requirements gathering from SMEs to development in Python and visualizing findings in Tableau
- Created, optimized, and measured KPIs for machine learning model designed to augment existing FDA import screening systems, resulting in a projected 33% reduction in hourly manual reviews
- Led the development and implementation of numerous user-facing solutions in Tableau, allowing for quick internal review of millions of medical device records by FDA SMEs across shortage prevention and illegitimate product detection efforts

Data Scientist   July 2021 - June 2022

- Streamlined flight trajectories for government aircraft by leveraging a faster-RNN deep learning pipeline in Python, automating the categorization of millions of vertical obstructions across dozens of distinct object classes in satellite imagery
- Generated geospatial layers encompassing key environmental factors, such as elevation change, using Python, PostGIS, and QGIS to aid search and rescue teams in discerning relevant terrain for dozens of missing person investigations
- Designed and optimized postgreSQL queries to efficiently retrieve big data from AWS RDS and S3 and analyze in scalable EC2 instances, enhancing query performance by reviewing execution plans and implementing optimized indexing strategies
- Designed company interview framework for all new data science applicants to accurately gauge technical aptitude and conducted interviews to assess candidates' suitability for data scientist and senior data scientist roles

EDUCATION

Master of Science in Data Science   June 2020 - May 2021
University of Virginia, Charlottesville, Virginia

- 3.97 GPA, Student Class President

Bachelor of Science in Economics with High Honors, Minor in Mathematics   Sept. 2016 - April 2020
University of Michigan, Ann Arbor, Michigan

Beijing Language and Culture University (北京语言大学), Beijing, China   Sept. 2018 - Dec. 2018

- Recipient of the U.S. Department of State Gilman Scholarship to study Mandarin as a critical language in Beijing, China