Austin Shearin

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https://www.linkedin.com/in/austin-shearin Active Security Clearance

Summary

Data Science Manager with 10+ years of experience turning messy, high-volume data into production insight. I lead cross-functional teams of scientists, engineers, and software developers while still acting as the principal architect and hands-on developer of data lakes, ETL and ML pipelines, and on-prem and/or cloud infrastructure. Recent work includes a multi-technology big data lake for DoD spectrum management, a SaaS data storage and analytics platform, and an IIoT predictive-maintenance application. Known for tight delivery, clear road-mapping, and code-level ownership from ingestion through deployment. I build data products end-to-end, then build and lead the teams and processes that keep them running.

Work Experience

Data Science Manager, *Expression Networks LLC* 10/2023 – Present

- Manage and lead cross-functional teams on multiple simultaneous projects involving data related to electromagnetic spectrum usage for the Department of Defense, such as EMBM-J
- Interface with program offices to understand business requirements and represent the data science team in discussions about technical solutions for analyzing the usage of the electromagnetic spectrum
- Principle developer and architect of data pipelines to retrieve, standardize, normalize, aggregate, and de-duplicate geospatial and signal data from various intelligence communities within the government
- Experiment with and optimize machine learning models for various applications, including predicting electromagnetic interference, performing entity resolution, and conducting time series analysis
- Spearhead continuous improvement efforts in processes and technical competencies while establishing and maintaining standards of excellence across the organization

Director of Data Science, *SynTouch, Inc.* 02/2022 – 10/2023

- Data scientist, software engineer, and solutions architect, responsible for defining the future of the company's capabilities in solving issues related to haptic perception (or touch)
- Principal investigator for research projects involving developing models that relate haptic perception to preference, utilizing data from the Toccare Haptic Measurement System (THMS) and consumer preference panels
- Sole developer of a web-based single page application SaaS platform for storing, analyzing, and modeling data from the THMS and customer-uploaded metadata, featuring data visualizations, statistical analysis, and machine learning model training and utilization
- Managed customer engagements to solve haptic perception challenges, encompassing defining the scope of work, designing experiments, performing analysis, and presenting results and findings to the client

Senior Device Systems Engineer – Team Leader, *Brewer Science, Inc.* 06/2018 – 02/2022

- Led cross-functional teams in the development of multiple Internet of Things (IoT) sensing systems, including industrial process monitoring, gas sensing, and water quality measurements
- Principal investigator and project manager for all IoT sensing system projects, encompassing everything from analog to digital conversion on a printed circuit board to the analysis of data on a web-based dashboard
- Implemented a mesh and cellular network system to transmit data to the cloud from client sites; designed and deployed ETL pipelines to process data in real time; and developed data science methods for predicting equipment failure modes, conduct time series analysis, and incorporated statistical process control
- Technical point of contact with customers, beta phase partners, and joint development members

Research Associate III, *Brewer Science, Inc.* 05/2016 – 06/2018

- Principal investigator of several carbon and semiconductor-based nanomaterial sensing platforms in the flexible hybrid electronics business unit
- Performed experiments on material composition, sensor design, and manufacturing processes utilizing design of experiments to optimize manufacturing yield and sensor performance
- Designed software to automate custom experimental equipment to perform controlled experiments to measure sensor performance to varying stimuli such temperature, humidity, pressure, vibrations, light, etc.
- Utilized statistical analysis to predict manufacturing yield and sensor performance based on DOE results and developed machine learning models to accurately measure an analyte even with low signal to noise ratios

Education

M.S. Materials Science, *Missouri State University*, GPA 3.97

B.S. Physics, *Missouri State University*, GPA 3.89

Technical Certifications

AWS Certified Cloud Practitioner, Amazon Web Services

Python Programmer, DataCamp

Data Scientist, DataCamp

Data Analyst, DataCamp

Machine Learning Scientist, DataCamp

Scrum Project Management, The Mathis Group, Inc.

Statistical Thinking for Industrial Problem Solving, SAS

Skills and Expertise Highlights

Python

Software development, data engineering, exploratory data analysis, artificial intelligence, and many other applications

Databricks

Administration and development of ETL pipelines, data governance policies, and machine learning models

Docker/Containers

Development, deployment, and orchestration of multi-container applications on premises and in the cloud

Statistics

Descriptive and inferential statistics including hypothesis testing, design of experiments, and ANOVA

Machine Learning

Design, training, and production deployment of supervised and unsupervised models for classification, regression, clustering, anomaly detection, and time-series forecasting—using scikit-learn, PySpark MLlib, and related MLOps practices

Databases

Design, implementation, and maintenance of SQL, NoSQL, and graph databases including Elasticsearch, MongoDB, MySQL, Neo4j, Postgres, and Redis

Amazon Web Services

Design, deploy, and manage multi-service solutions to support various applications including IoT data streams, containerized web applications, ETL pipelines, and data lakes

Project Management

Agile, Kanban, SCRUM

Other Notable Software

Atlassian JIRA/Confluence, AutoCAD, Git, Lucid, OriginLab, SAS JMP/JSL