



# Austin Shearin

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Active Security Clearance

## Summary

Data scientist/engineer leader with team and project management expertise, backed by a strong foundation in applied engineering, physics, and materials science. I lead by example and set the standard of excellence within teams and departments. I excel in directly interfacing with customers to translate business requirements into technical solutions, rapid prototyping and experimentation of innovative features to gain customer buy-in, and reshaping processes to introduce continuous improvements for better performance and efficiency. I thrive as an innovative leader who can push a team or project to move faster, more efficiently, and, if necessary, start over to bring maximum value to an organization or end customer.

## Work Experience

### Senior Data Scientist (Managing Lead), 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
- Direct and actively participate in developing 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 locally and in the cloud

### Statistics

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

### 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