

# Joshua Hyatt

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## PROFILE

I am a pragmatic and results-oriented Data Scientist with over 10 years of experience across the automotive, finance, and education sectors, delivering production-grade machine learning solutions. Passionate about solving real-world problems using statistical modeling, computer vision, and NLP. Proven ability to lead cross-functional projects, to design and implement robust MLOps pipelines using Databricks, Docker, and CI/CD best practices. I'm adept at working in collaborative environments and translating complex data into strategic business outcomes.

## PROFESSIONAL EXPERIENCE

### Data Scientist III

July 2018 – Present

Denso International America, INC. - Maryville, TN

- Architected and deployed predictive maintenance systems for critical manufacturing components using vibration analytics and time-to-failure modeling, mitigating ~396 hours of annual downtime and delivering \$178K+ in documented cost avoidance.
- Built end-to-end computer vision defect detection pipelines using segmentation-based CNNs and convolutional autoencoders; deployed containerized Flask APIs integrated with robotic process control (OPCUA), contributing to \$1.2M+ in operational impact.
- Led enterprise Databricks implementation for time-series analytics and ML workloads, leveraging MLflow, Unity Catalog, and automated data quality pipelines for governed model lifecycle management.
- Designed and implemented CI/CD pipelines (Azure DevOps, GitLab) to automate testing, validation, containerization, and deployment of ML models and API endpoints to production environments.
- Developed NLP solutions using sentence embeddings and UMAP clustering to structure unstandardized procurement data, improving spend visibility and identifying \$75K+ in cost avoidance opportunities.
- Contributed to development of a tariff rules engine supporting real-time and scenario-based analysis, enabling data-driven strategy with reported impact exceeding \$140M.
- Collaborated with MIT to model supply chain resilience using Gurobi optimization and GIS datasets, informing disaster risk mitigation and scenario planning.
- Architected and deployed an Enterprise CI/CD pipeline with Azure Devops and Databricks, to automate testing and deployment of ML applications
- Mentored and led junior data scientists in production ML delivery, establishing standardized experiment tracking, CI/CD workflows, and deployment practices.

### Business Analyst II ← DBA ← Fraud Analyst

Nov 2015 – July 2018

Elavon. - Knoxville, TN

- Improved fraud detection accuracy and work queue triage, resulting in an additional \$200K in annual fraud prevention.
- Built a web scraping tool that halved account investigation time, with estimated annual savings between \$25K–\$50K.
- Founded and led the Dedicated Solutions Team to automate reporting and data quality monitoring for internal business units.
- Recognised with the Pinnacle Award (top 10% company-wide performance) in 2016.

#### **Adjunct Mathematics Professor**

**Aug 2013 – Nov 2015**

Pellissippi State Community College - Knoxville, TN

- Taught Statistics, Algebra, and Business Calculus, supporting diverse learners and maintaining strong student outcomes.

## **EDUCATION**

### **Masters of Science in Mathematics,**

**July 2013**

University of Tennessee- Knoxville, TN

*GPA: 3.97/4.0*

### **Bachelor of Science in Mathematics**

**May 2011**

Murray State University- Murray, KY

*GPA: 3.81/4.0*

## **SKILLS**

### **Machine Learning & AI**

- Supervised & Unsupervised Learning, Time Series Forecasting
- Anomaly Detection (Autoencoders, One-Class SVM, LOF, PCA)
- Natural Language Processing (Sentence & Word Embeddings, NER, Sentiment Analysis)
- Computer Vision (CNNs, U-Net, Image Embeddings)
- Optimization & Simulation (Gurobi, SEIR & Scenario Modeling)

### **Programming & Frameworks**

- Python (NumPy, Pandas, SciPy, NLTK, SQLAlchemy, Scikit-learn, TensorFlow, UMAP, XGBoost)
- SQL, Bash, Spark (PySpark)
- MLOps & DevOps (Git, CI/CD, Docker, MLflow, Pytest)

### **Data & BI Tools**

- SQL (PostgreSQL, MSSQL, Cassandra)
- DOMO, Tableau, Jupyter Notebooks, Quarto
- Data Modeling, Feature Engineering, Data Wrangling

### **Platforms & Infrastructure**

- Databricks (Jobs, Pipelines, Workspace Administration, Repos, Unity Catalog, Vector Stores, Workspace Admin)
- GitLab (Runners, CI/CD Pipelines)
- Azure Cloud & Azure DevOps
- Linux (Command Line, Scripting), REST API Deployment and Model Serving

### **Collaboration & Leadership**

- Agile & Scrum Delivery
- Technical Mentorship & Curriculum Development
- Cross-Functional Communication (Business, Engineering, Executives Stakeholders)
- Documentation & Reproducibility & ML Governance Practices