



Jaylen Callahan

Application for Mid-Level AI Engineer

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AUGUST 25, 2026

Hiring Manager
AeroVista Systems
Dayton, OH

Dear Hiring Manager,

I am applying for the Mid-Level AI Engineer role at AeroVista Systems. I have more than four years of experience building production machine learning systems and AI applications for manufacturing, supply chain, and operations teams. My work has covered the full delivery cycle: framing an operational problem, preparing data, training and evaluating models, exposing them through APIs, deploying them on AWS, and monitoring their performance.

In my current role, I built a production RAG assistant with Python, FastAPI, OpenSearch vector search, and AWS services. It helps service analysts find contract and maintenance guidance while showing cited source passages and clear confidence limitations. I also created an MCP server that exposes approved inventory, work-order, and forecasting capabilities as reusable tools, with authentication, versioning, rate limiting, and API documentation. These projects required more than model development; they required careful decisions about access, reliability, evaluation, and how people would use the results in daily work.

I have also built forecasting, classification, and anomaly-detection systems for parts demand, repair volume, and equipment service events. I established MLflow and Weights & Biases workflows for experiment tracking, registry promotion, automated evaluation, and A/B testing, and designed Databricks medallion pipelines with freshness checks, feature validation, and drift alerts. I am comfortable explaining model tradeoffs, uncertainty, and false positives to executives, BI developers, and domain experts, and I have mentored engineers on prompt engineering, explainability, testing, and responsible AI practices.

AeroVista's focus on turning commercial and operational data into dependable products fits the way I work: start with a measurable decision or workflow, build the smallest useful solution, and improve it through evidence from users and production behavior. I would welcome the opportunity to bring my experience with LLM applications, MLOps, AWS, Databricks, and operational analytics to your modernization initiative.

Thank you for your consideration. I would welcome the opportunity to discuss how my experience could support AeroVista Systems' commercial operations intelligence work.

Sincerely,

Jaylen Callahan

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