

Ryan Wallace

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Templates: customize the bracketed fields before sending.

[Date]

Hiring Team

[Company]

Re: ML/AI Engineer

Dear Hiring Team,

I build machine learning systems with attention to the data, evaluation, and software that make them useful in practice. I am applying for the ML/AI Engineer role at [Company] because [specific reason tied to the team's product, users, or research]. My background combines applied modeling with the infrastructure needed to serve and operate it.

At the Federal Reserve Bank of Boston, I built regularly used classifiers for debit-card transaction descriptions that saved researchers hundreds of hours of manual labeling. I combined HDBSCAN clustering, random forests on text embeddings, and LightGBM with human annotations and LLM-generated labels produced through constrained decoding. I treat label quality, model choice, and researcher feedback as parts of the same engineering problem.

I also built and served a retrieval-augmented generation application with vLLM so researchers could analyze internal reports using information available as of specified dates. I designed an NVIDIA H100 GPU cluster and used Hugging Face Transformers for inference and LoRA fine-tuning, with evaluation through human review, LLM-as-a-judge, perplexity, and embedding similarity. That work gave me experience across model development, serving infrastructure, and the practical question of how to assess output quality.

In my open-source Jobman Diagnose project, I combined deterministic failure analysis with optional, schema-validated LLM suggestions. The system preserves local findings and retry advice when a provider fails or generated suggestions fail validation. I evaluated it on 72 cases across 216 model executions, achieving at least 95% useful diagnoses with no unsupported claims observed in that evaluation. It reflects how I approach AI engineering: define the task, evaluate behavior, and design for failures as carefully as successful responses.

I would bring this approach, along with experience leading two data scientists, to [Company]'s work on [specific ML/AI priority]. Thank you for considering my application. I would welcome the opportunity to discuss how I could help your team turn models into dependable tools for its users.

Sincerely,

Ryan Wallace