

AI use-case problem statement

Problem Statement: You are required to build and deploy an intelligent chatbot that assists users, engineers, policymakers, or EV owners by answering questions related to **Electric Vehicle (EV) Charging Infrastructure.**

The chatbot must invoke an LLM that is grounded to a vector store populated with detailed unstructured documents — including brochures, deployment blueprints, and technical guides.

Your chatbot must:

- Accept freeform user questions via API or simple frontend
- Retrieve the most relevant chunks of EV infrastructure data from a pre-built vector store
- Be deployed on a scalable infrastructure with clear cost estimations on AWS



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Success Criteria:

- Chatbot responds accurately to at least a diverse EV-related questions.
- Answers are clearly grounded in the brochure content, with zero hallucination.
- Vector store retrieval must demonstrate correct semantic relevance.
- Deployment should be fully functional and accessible via an endpoint or UI for demonstration.