REQUEST FOR PROPOSAL (RFP)

Automated Troubleshooting of Vehicle Issues Using Agentic AI
By ABC Technologies Pvt. Ltd.

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1. Company Overview

ABC Technologies Pvt. Ltd. is a leader in digital transformation, specializing in intelligent automation, enterprise software solutions, and AI-driven innovation for automotive and manufacturing sectors.
Our mission is to simplify complex workflows through smart, scalable solutions that enhance efficiency, reduce operational costs, and accelerate decision-making.

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2. Project Requirements

2.1 Project Background

Vehicle troubleshooting today relies heavily on **manual reference to repair manuals, diagnostic PDFs, OEM knowledge bases, and historical service records**. This process is slow, inconsistent, and highly dependent on technician expertise.

We aim to build an **Agentic AI–based troubleshooting assistant** that can interpret manuals, understand symptoms, and guide technicians toward accurate step-by-step diagnosis.

2.2 Business Goal

To **automate and accelerate vehicle issue diagnosis** by using AI agents that can read, interpret, and reason over technical manuals, fault codes, and historical data.

2.3 Problem to Solve

Technicians currently:

- Spend excessive time searching manuals

- Depend on tribal knowledge

- Lack consistent diagnostic guidance

- Face challenges when manuals are fragmented across multiple documents

The goal is to build an AI system that:

- Reads and understands all manuals

- Maps symptoms → probable root causes

- Provides guided troubleshooting steps

- Reduces service time and improves accuracy

2.4 Current State

- Manuals exist across multiple PDF formats

- No centralized search or indexing

- No automated troubleshooting workflow

- Troubleshooting steps vary between technicians

2.5 Project Scope

Vendors must help design and build an **agent-based AI troubleshooting solution**:

Required Capabilities

- Document ingestion (PDF, images, manuals)

- Text extraction and chunking

- Embedding + vector search

- Multi-agent system for:

  o Symptom understanding

  o Troubleshooting step generation

  o Root cause identification

  o Recommendation explanation

- UI for technicians

- API layer for integrations

- Observability & monitoring

2.6 Technology Expectations

You may propose your preferred stack, but we currently use:

- **Azure Cloud** (OpenAI, Blob, Functions)

- **Python** for AI components

- **React** for UI

- **Vector DB** (Azure Search, MongoDB Atlas, or local LLM options)

2.7 What We Expect to Be Built

- End-to-end design

- AI ingestion pipeline (PDF → text → embeddings → vector store)

- Agentic workflow for troubleshooting

- Suggestion ranking & confidence scoring

- UI design (technician dashboard + chat + recommendations)

- Testing (unit, integration)

- Deployment architecture (cloud or hybrid)

2.8 Management & Communication Requirements

- Weekly sprint updates

- Agile methodology

- Collaboration via Teams/Jira

- Documented APIs + architecture

- NDA required

2.9 Roles Needed

Vendors should include:

- AI/ML Engineer

- Agent Workflow Engineer

- Backend Developer (Python/Node/.NET)

- UI Engineer (React)

- QA Engineer

- DevOps/Cloud Engineer

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3. Project Budget and Timeline

3.1 Budget

Proposals may include tiered pricing.
We expect:

- Cost breakdown by module

- Licensing/hosting costs

- Support & maintenance cost

3.2 Timeline

Target duration: **10–16 weeks**
Key milestones should include:

- Requirement analysis

- Architecture & design

- Prototype

- Full implementation

- Testing & validation

- Deployment & KT

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4. Proposal Requirements

Your proposal **must** include:

- Company profile & experience

- Technical approach

- Architecture overview

- Agent design & workflow

- Data processing & vector search strategy

- Model hosting strategy (cloud or local LLM)

- Timeline with milestones

- Detailed cost estimate

- Risks & mitigation

- Support & go-live plan

Deadline: *[Insert deadline]*
Submit in PDF or Google Docs format.

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5. Point of Contact

Name: *[Insert Name]*
Designation: *[Insert Role]*
Email: *[Insert Email]*
Phone: *[Insert Phone]*