“Easy Car Care: Troubleshooting Guide and Car General Maintenance System”

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INTRODUCTION

In today's time, owning a car is a challenge, taking care of it and keeping it in proper running condition takes a lot of effort. Owning a car is a necessity, but it may be a problem in terms of the life span of the car because most of the components don't last long. Confidently maintaining car by learning about the fundamentals of auto repair services and what to anticipate, being aware of the warning signs of problems, and embracing preventative maintenance. It might ultimately increase the lifespan of your car and save you from making more frequent visits for care and attention.

The Easy car care: Troubleshooting guide and car general maintenance system is a centralized system that provides general maintenance instructions and a troubleshooting guide to make the process of taking care of your car easier. The system aims to equip users with the information and tools necessary to maintain their cars in excellent shape as well as handy repairs for typical automotive problems.

According to J. S. Liang (2014) the phases in the troubleshooting life cycle are demand, arrangement, implementation, assessment, and disposal. Several life cycle aspects must be clearly divided in order to develop a service-centered automotive troubleshooting service system model for the automotive industry. From the perspective of the consumer, it includes acquisition, use, and disposal. From the perspective of a motor manufacturer, the life of a product starts with the raw materials and continues with design, production, distribution, and sale. Troubleshooting is viewed by service providers as a core component that they provide to customers, with tangible products acting as mere conduits for the transmission of services.

The capstone project can contribute and benefit to society because it is a platform that prioritizes accessibility by providing car-related solutions that are suitable for users with varying levels of experience. By providing clear instructions and step-by-step troubleshooting guides, the application enables users to address typical issues, thereby reducing reliance on costly expert services. Cost-effective auto maintenance and repairs can be expensive, particularly when small problems get worse because they are ignored. The program may enable timely repairs and preventive maintenance, which could save users a significant amount of money over time by assisting in the early detection of issues. And the system addresses this issue by offering quick solutions and organized maintenance schedules, enabling users to efficiently manage their vehicle care tasks and freeing up valuable time. The system helps to maintain a sustainable environment. In addition to extending a vehicle's lifespan, proper car maintenance lowers emissions and preserves resources for future generations. Easy car care: Troubleshooting guide and car general maintenance system promotes environmentally friendly driving practices by promoting routine maintenance and quick issue resolution, making it a useful resource for both vehicle owners and the larger community.

Navigating the world of automotive care through technology can be a great help for car owners. Easy car care: Troubleshooting guide and car general maintenance system is a great tool for car owners who want to maintain their vehicles in a way that is affordable, safe, sustainable, and convenient. The system seeks to improve driving overall and to encourage more peace of mind while driving by addressing the problems related to car maintenance.

General Objective:

To develop an integrated automotive platform that enhances car owners' understanding and management of vehicle maintenance by providing a user-friendly interface for symptom-based issue diagnosis, personalized maintenance schedules, educational resources on fundamental car maintenance tasks, and a community-driven space for knowledge-sharing and feedback.

Specific Objectives

- To create a user-friendly interface for diagnosing common car issues based on user-input symptoms and providing tailored troubleshooting suggestions.
- To build a database of recommended maintenance schedules tailored to specific car makes and models, guiding users on essential tasks like oil changes and tire rotations.
- To offer services, and tutorials covering fundamental car maintenance tasks such as oil changes, engine tune up, tire replacement, and overall chechup to empower users with practical knowledge.
- Establish user registration to personalize advice and gather feedback on troubleshooting effectiveness, fostering a community-driven platform for car care enthusiasts to share knowledge and experiences.

Scope and Limitation

This project encompasses the development of a comprehensive system offering general car maintenance instructions and troubleshooting guides in MSU-Marawi Campus, Marawi City. A database will be created containing recommended maintenance schedules specifically tailored to various car makes and models.

The system's effectiveness is contingent upon the accuracy and completeness of user-provided information, with inaccurate symptom descriptions potentially leading to incorrect troubleshooting suggestions, includes the system's inability to physically inspect vehicles, potentially hindering the diagnosis of hands-on problems. While offering services on routine maintenance and common issues, the system may not encompass all possible car problems or complex repairs necessitating professional assistance. The accuracy of maintenance schedules and troubleshooting advice relies on the availability and precision of data for various car makes and models. User privacy and data security are critical considerations due to the collection and storage of personal information and user feedback.

REFERENCES

J. S. Liang, “An approach with multi-tier automotive knowledge formalization for troubleshooting activities - Jeremy S Liang, 2023,” *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*, 2023.