

TechAuto:Embracing Artificial Intelligence In Web-Based Automobile Service Management System

Abstract

As the global automotive industry is progressing towards the future of mobility, Garage Chains are due for a major overhauling. With the advent of digitisation, customer expectations have shot up and now they demand a seamless experience even in the aftersales automotive ecosystem. The Online Management System for Automobile Services is a progressive step in the field of service centers and garages. Any car user can make use of this website to locate and communicate with the service centers or garages in their vicinity. This website uses innovative technology that connects you with a Mechanic at the tap of a button

Our system offers a host of groundbreaking innovations in garage management software and garage management systems that are instrumental in redefining the entire digital journey of the customer when it comes to the maintenance and garage chains landscape.

Independent garages are able to:

- Enhance customer relations
- Simplify stock control
- Improve mechanic efficiencies
- Monitor performances

The system includes

- ❖ **Garage Management Solutions** :help garage chains to utilize their services for high efficiency with a larger objective of providing a delightful customer experience. It facilitates almost everything right from extensive searches, appointment booking, parts ordering to even report generation.
- ❖ **Time Registration** is a kiosk-based application used for optimizing operational efficiency by tracking mechanic's workload. It manages work hours spent on each task that is allocated centrally in the garages.
- ❖ **Online Workshop Planner (OLP)** is an extensively integrated centralized platform for managing all the garages bookings and other services. It synchronizes with garage planners for better management.
- ❖ **A mobile and tablet** application that helps mechanics to access information at their workplace and execute work orders. It provides information related to maintenance and repairs to the mechanics and facilitates them to set their availability, schedule repairs, track or order spare parts.
- ❖ **Emergency App** A one of a kind mobile app specifically created for roadside assistance, automatic emergency alerts and response. It instantly sets

emergency management plans, location reporting & personalized messages directed to emergency response centres.

- ❖ **Mechanic training platform** A training platform to enable technical, sales and management training for garage personnel

Application Of AI in TechAuto

Categorization and prediction of demand of spare parts

A modern automobile is composed of around about 30,000 parts . Components that bust over time, need to be replaced during the maintenance process. Therefore, spare parts are needed at the right place, in the right quality and quantity, for replacement of broken parts to keep the automobile working.

Manage and find efficiency of workers:Using artificial intelligence to transform employee productivity

Auto service reminders based on user statistics, Customer segmentation and Auto Marketing campaign

Technology : Django,scikit-learn,tensorflow

programing language : python

Database :postgresql

Features of existing system

- Auto service reminders
- Auto marketing campaigns
- Employee productivity assessment
- Sparepart demand prediction
- Auto status information alerts
- Auto purchase order generation
- Employee work scheduling
- Sales prediction
- Forecast Workload
- Auto service registration
- Emergency one click assistance
- Monitor quality of work
- Auto Feedback system
- Employee rating system

Functions of proposed system

Auto service reminders based on user statistics, Customer segmentation and Auto Marketing campaign. Customers will map to different groups using machine learning model based on customer behaviour