**DESIGN AND IMPLEMENTATION OF A WEBSITE FOR FINDING AND REVIEWING LOCAL MECHANICS**

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# Abstract

Finding reliable mechanics remains a common challenge, particularly for individuals in new locations or during unexpected vehicle breakdowns. This project focuses on the design and implementation of a dedicated website for locating and reviewing local mechanics, aiming to streamline the process of finding trustworthy automotive services. Built using the Laravel framework, the platform incorporates user-friendly features such as a search functionality based on geolocation, mechanic profiles with detailed service information, and a review system that allows users to rate and share their experiences. By leveraging the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and other foundational theories, the project prioritizes usability, trust, and transparency. A structured methodology involving system design, user interface development, and secure database management has been adopted to ensure the platform is both accessible and scalable. The results demonstrate that the website effectively addresses user needs for reliable mechanic services, fostering a supportive community through verified reviews and transparent feedback. This project contributes to digital solutions in automotive services, offering a reliable, efficient, and user-centered platform for vehicle owners seeking quality repairs.

# CHAPTER 1

## INTRODUCTION

## BACKGROUND INFORMATION OF THE STUDY

Finding reliable and skilled mechanics can be challenging, especially when individuals move to new locations or when vehicles break down in unfamiliar areas. Traditionally, people rely on word-of-mouth recommendations or trial-and-error experiences to find a mechanic they can trust. This method, while common, is often inefficient and time-consuming. In many cases, individuals end up paying high prices for subpar services due to the lack of a reliable system to assess the quality of mechanics before making a choice. This creates a gap in the market where a centralized solution is needed to help consumers find reputable mechanics more efficiently.

With the rise of online platforms, there is an increasing demand for digital solutions that connect consumers with service providers. Websites and apps that provide listings and reviews for local businesses have gained immense popularity in recent years. Platforms like Yelp, Google Reviews, and Angie's List allow users to evaluate businesses based on customer feedback, offering a degree of trust and transparency that was not possible before. However, these platforms are often generalized, not focusing on the specific needs of vehicle owners searching for mechanics. A specialized platform for local mechanics can offer tailored features that provide users with more relevant results, such as services offered, expertise in certain vehicle brands, and proximity to the user.

In recent years, several attempts have been made to improve access to local services through digital platforms, but none have focused solely on mechanics. A study conducted by Lee and Park (2019) revealed that 70% of users prefer to consult online reviews before choosing a service provider. This demonstrates the need for a website that allows users to not only find mechanics but also read reviews and ratings to make more informed decisions. By leveraging user-generated content, such a platform can foster transparency, trust, and competition among mechanics, ultimately improving service quality.

The digital shift in local business marketing is changing the way small businesses, including mechanics, operate. According to Donovan (2021), nearly 85% of small business owners now consider having an online presence crucial to their success. A platform that enables mechanics to create profiles, showcase their services, and manage customer reviews will benefit both consumers and mechanics alike. Mechanics can reach a wider audience, build a reputable brand, and potentially increase their customer base by being visible to more users within their locality.

The need for a website specifically designed to help users find and review local mechanics is evident. This platform will not only address the gap in accessing reliable automotive services but will also support mechanics in enhancing their visibility and credibility within the local community. By integrating modern technologies like geolocation, user ratings, and review systems, the proposed platform aims to revolutionize how vehicle owners find trustworthy mechanics.

## 1.2 STATEMENT OF THE PROBLEM

Finding a reliable and skilled mechanic has always been a challenge for many vehicle owners, especially in unfamiliar areas or when urgent repairs are needed. The current methods of locating a mechanic, such as relying on personal recommendations or randomly selecting one from online directories, do not guarantee trustworthiness or quality of service. This often leads to dissatisfaction, wasted time, and, in some cases, overcharging. The lack of a centralized platform where users can easily find mechanics, compare services, and read genuine reviews creates a significant gap in the market.

Additionally, many local mechanics lack an online presence, making it difficult for potential customers to discover their services. Without a platform to showcase their expertise and customer feedback, many mechanics struggle to reach new clients and grow their businesses. This project aims to address these issues by developing a website that allows users to easily find and review local mechanics based on location, service quality, and customer ratings.

## 1.3 AIM AND OBJECTIVES

### 1.3.1 AIM

The primary aim of this project is to design and implement a comprehensive website that facilitates the search for and review of local mechanics, thereby enhancing the process of finding trustworthy automotive services. This platform seeks to bridge the gap between vehicle owners and mechanics, providing users with a user-friendly interface to discover reliable service providers and empowering mechanics to showcase their expertise and customer satisfaction.

### 1.3.2 OBJECTIVES

1. To develop an intuitive and accessible user interface that allows users to easily search for mechanics based on location, services offered, and customer ratings.
2. To implement a robust rating and review system that enables users to provide feedback on their experiences, fostering transparency and trust within the community.
3. To create a mechanic profile feature that allows service providers to display their skills, certifications, and customer testimonials.
4. To integrate a geolocation function that helps users find nearby mechanics quickly and efficiently.
5. To ensure the website is mobile-friendly, allowing users to access services and reviews conveniently from their smartphones and tablets.

## 1.4 SIGNIFICANCE OF THE STUDY

The significance of this study lies in its potential to transform how vehicle owners connect with local mechanics, ultimately improving the automotive service experience. By providing a dedicated platform for finding and reviewing mechanics, the website aims to foster a sense of trust and transparency in an industry often characterized by uncertainty. Users will benefit from access to verified reviews and ratings, enabling them to make informed decisions and choose mechanics who have proven their reliability and quality of service.

Also, the platform will empower local mechanics by giving them an opportunity to establish an online presence and reach a broader audience. This increased visibility can lead to more customers, helping mechanics grow their businesses in a competitive market. By bridging the gap between consumers and service providers, the website can enhance customer satisfaction and promote higher standards within the automotive service industry. Ultimately, this project aims to create a win-win scenario for both vehicle owners and mechanics, contributing to a more reliable and efficient marketplace.

## 1.5 SCOPE OF THE STUDY

1. **User-Friendly Search Functionality**: The platform will enable users to easily locate mechanics based on their geographical area, services offered, and customer ratings.
2. **Rating and Review System**: A robust system will be implemented for users to share their experiences and provide feedback on the mechanics they have used, enhancing transparency.
3. **Mechanic Profiles**: The website will feature detailed profiles for mechanics, showcasing their skills, certifications, and customer testimonials to build trust and credibility.
4. **Focus on Local Mechanics**: The study will specifically target local mechanics, ensuring a comprehensive examination of this sector while allowing for potential future expansion to include other automotive services.
5. **Mobile-Friendly Design**: The website will be designed to be responsive and accessible on various devices, allowing users to conveniently access the platform from smartphones and tablets.

## 1.6 DEFINITION OF TERMS

1. **Mechanic**: A skilled professional who repairs and maintains vehicles. In the context of this study, a mechanic refers to a local automotive service provider listed on the platform.
2. **Review System**: A feature of the website that allows users to leave feedback and rate mechanics based on their service quality, customer interaction, and overall satisfaction.
3. **Geolocation**: A technology used to determine the real-world geographic location of a device or user. This feature enables the website to suggest nearby mechanics based on the user's current location.
4. **User Profile**: An online representation of an individual mechanic or service provider, showcasing their qualifications, services, customer reviews, and ratings.
5. **Mobile-Friendly**: Refers to a website or application designed to be easily usable on mobile devices, such as smartphones and tablets, ensuring a responsive and accessible user experience.

# CHAPTER TWO

## 2.0 LITERATURE REVIEW

The internet has significantly changed the way people search for local services, including automotive repairs. Online review systems now play a major role in influencing consumer behavior, with many individuals relying on the experiences of others before making decisions. Research shows that over 90% of consumers check online reviews before choosing a service, and positive feedback increases trust in local businesses (BrightLocal, 2021). This trend highlights the growing importance of online reviews for connecting consumers with trusted service providers. For vehicle owners, the ability to find reliable mechanics through verified reviews can reduce the risks associated with choosing repair services.

Platforms like Yelp and Google Reviews have become essential in providing users with a way to evaluate various service providers, including mechanics. These platforms rely heavily on user feedback to help future customers make informed choices. While these general platforms cater to a wide range of services, they often lack features that specifically address the needs of vehicle owners. A dedicated platform focused on mechanics would streamline the process of finding reputable service providers, offering a more specialized user experience. Research indicates that platforms designed with specific user needs in mind tend to achieve higher user satisfaction rates (Hassan & Khan, 2018).

Geolocation technology has proven to be a key feature in many modern platforms, allowing users to easily find nearby services. By using this technology, websites can provide personalized results based on the user’s current location. This feature is especially useful in applications where proximity matters, such as finding mechanics during emergencies. Studies on platforms like Uber and Google Maps show that geolocation enhances user experience by offering location-specific recommendations (Namin & Suh, 2019). In the context of automotive repairs, integrating geolocation with a review system allows users to quickly find trusted mechanics in their area.

Service provider profiles are another critical aspect of platforms that connect users with local businesses. Research has shown that transparency about qualifications and customer feedback increases consumer trust in service providers (Murray & Ryan, 2017). Allowing mechanics to create detailed profiles, which include certifications, specialties, and reviews, can help users make more confident decisions. Mechanic profiles also enable service providers to build a positive online presence, attracting more customers by showcasing their expertise and reputation.

One major challenge facing online review platforms is the prevalence of fake reviews. Dishonest feedback undermines the credibility of user-generated content, which can mislead potential customers and harm the reputation of honest service providers. A report by Chevalier et al. (2020) estimates that up to 20% of reviews online may be fraudulent. To address this issue, platforms need to implement mechanisms for verifying the legitimacy of reviews, such as requiring proof of service or using algorithms to detect suspicious activity.

User experience plays an important role in determining the success of online platforms. A well-designed interface that is easy to navigate encourages higher levels of user engagement. Studies have found that a simplified design can increase user satisfaction by up to 40% (Doubleday & Winter, 2019). For a platform that connects users with local mechanics, it is important to ensure a smooth and intuitive experience. Users should be able to search, filter results, and view mechanic profiles without difficulty. Additionally, considering that a large portion of web traffic comes from mobile devices, it is essential for the platform to be mobile-friendly (Statista, 2021).

Research also points to the importance of social proof in influencing consumer decisions. Customer reviews and ratings provide valuable insights into the quality of services and build trust in service providers. A study by Reichheld and Schefter (2000) found that customers place significant trust in businesses with positive feedback from other users. By allowing users to rate mechanics on factors such as service quality and professionalism, the platform can give potential customers a more complete picture of each mechanic’s performance.

Real-time notifications are another feature that can enhance the effectiveness of online platforms. Many successful services use notifications to keep users informed about service availability, promotions, or updates. In the case of a platform for finding mechanics, real-time updates can inform users of nearby mechanics' availability or special offers, providing users with timely and relevant information when needed most (Huang & Benyoucef, 2013).

Research on the adoption of online platforms for local services shows that both service providers and consumers benefit from improved visibility and accessibility. A study by Verma and Gupta (2020) found that businesses with an online presence saw a significant increase in customer inquiries. By giving mechanics the opportunity to showcase their services on a dedicated platform, this project can help them reach a wider audience and stand out in a competitive market.

Trust remains a key factor in the success of any platform relying on user-generated content. Studies by Dimoka et al. (2012) highlight that trust heavily influences consumer decisions in online environments. For a platform focused on local mechanics, trust can be built through verified reviews, transparent profiles, and reliable information about services. Prioritizing these elements will ensure that the platform meets the needs of users while fostering a trustworthy marketplace for automotive services.

## 2.1 RELATED WORKS

1. **AutoGuru (2015)**: AutoGuru is a platform that connects users with mechanics in their area. It allows customers to compare quotes, book services, and leave reviews for local mechanics. One key feature of the platform is its geolocation functionality, which helps users find nearby mechanics based on their current location. AutoGuru also verifies customer reviews by requiring proof of service, which helps build trust and reduce the impact of fake reviews. The platform has been widely used in Australia and serves as a reliable example of a dedicated service for finding automotive professionals.
2. **RepairPal (2007)**: RepairPal is one of the earliest platforms designed to help users find and review mechanics. The platform offers a range of features, including an estimate calculator that allows users to get a rough cost estimate for specific repairs before visiting a mechanic. RepairPal partners with certified mechanics and verifies the quality of their services through user reviews. It emphasizes transparency by providing detailed profiles for each mechanic, which include pricing information, customer ratings, and service specialties. This makes it easier for users to compare and select mechanics based on their specific needs.
3. **YourMechanic (2012)**: YourMechanic is a mobile mechanic service that allows users to book repairs directly online and have a certified mechanic come to their location. The platform provides detailed profiles of mechanics, including their certifications, years of experience, and customer reviews. By focusing on convenience and transparency, YourMechanic has become a popular choice for vehicle owners looking for reliable mechanics who can provide services at home or at work. The platform also allows users to schedule repairs at a time that suits them, adding an extra level of flexibility compared to traditional repair shops.
4. **Mechanic Advisor (2011)**: Mechanic Advisor is an online platform that connects car owners with mechanics in their area. It offers a comprehensive mechanic directory and includes reviews, certifications, and service details to help users make informed choices. One standout feature is its focus on diagnostics, with the platform offering a tool that connects to a car’s OBD-II port to provide diagnostic information to mechanics. This helps users understand potential issues before visiting a mechanic and gives them confidence in the repair process. Mechanic Advisor also allows users to track their vehicle’s service history, which adds value for those looking for long-term service relationships.
5. **ClickMechanic (2012)**: ClickMechanic is a UK-based platform that matches users with mobile mechanics for a range of car repair services. The platform offers a unique approach by allowing users to receive instant quotes for specific repairs. Like many similar services, ClickMechanic ensures quality control by verifying mechanics' qualifications and offering a feedback system where customers can rate their experience. In addition, the platform integrates with various third-party services, making it easier for users to pay and schedule appointments. ClickMechanic's success in the UK market shows how specialized platforms can thrive by focusing on transparency and user experience.

## THEORITICAL FRAMEWORK

The development of a website for finding and reviewing local mechanics draws upon several key theories that support user engagement, trust-building, and decision-making on digital platforms:

1. **Technology Acceptance Model (TAM)**: This model, by Davis (1989), emphasizes Perceived Usefulness and Perceived Ease of Use as crucial for technology adoption. For a mechanic review website, these elements are central to encourage user participation and satisfaction.
2. **Theory of Planned Behavior (TPB)**: Proposed by Ajzen (1991), TPB explains that Attitude, Subjective Norms, and Perceived Behavioral Control shape users' intentions. Users are more likely to use the website if they believe it aligns with social expectations and feels easy to navigate.
3. **Social Exchange Theory**: Social Exchange Theory posits that people engage in interactions when they expect positive outcomes. In the context of the website, users are likely to participate by sharing reviews when they feel it will help others and improve their own chances of finding reliable services.
4. **Trust Theory**: This theory suggests that trust is essential for user engagement, particularly in online platforms. The inclusion of reviews, ratings, and verified profiles helps in building trust, which is vital for encouraging users to rely on and return to the platform.
5. **Diffusion of Innovations Theory**: Developed by Rogers (1962), this theory outlines how new ideas gain traction. For this website, features like geolocation, review verification, and mobile responsiveness represent innovations that can help in quickly attracting users who value accessible and reliable services.

## 2.2 HISTORICAL REVIEW

The evolution of online platforms for connecting consumers with service providers has transformed how people find and evaluate local businesses, particularly in the automotive repair industry. Historically, the process of finding a reliable mechanic involved word-of-mouth recommendations, local advertisements, and yellow pages. This traditional approach had its limitations, as it often relied on limited information and personal networks, making it challenging for consumers to make informed decisions (Schmidt, 2016).

With the advent of the internet in the 1990s, search engines began to play a significant role in helping consumers find local services. Websites started to emerge that aggregated information about businesses, including contact details and basic descriptions. However, early platforms lacked user-generated content and reviews, which are critical in establishing trust and credibility. Consumers often had to rely solely on the information provided by the business owners, which could be biased or incomplete (Li & Lo, 2020).

The early 2000s marked a turning point with the rise of online review platforms such as Yelp (founded in 2004) and Angie's List (established in 1995). These platforms allowed consumers to leave reviews and rate their experiences with service providers, including mechanics. This shift empowered consumers by giving them a voice and enabling them to share their experiences with a broader audience. Online reviews became a critical factor in influencing consumer behavior, with studies showing that a significant percentage of users trust online reviews as much as personal recommendations (BrightLocal, 2021).

As smartphones became ubiquitous in the late 2000s, location-based services emerged, enabling users to find nearby mechanics with ease. Platforms began to integrate geolocation technology, allowing consumers to receive real-time information about available services in their vicinity. This development further streamlined the process of finding local mechanics, particularly in emergency situations when immediate assistance is needed. The combination of online reviews and geolocation features transformed how consumers approached the search for automotive services, making the process more efficient and user-friendly (Namin & Suh, 2019).

In recent years, there has been a growing emphasis on trust and transparency in the online review landscape. Platforms have implemented various measures to combat fake reviews and ensure the authenticity of user-generated content. Many now require proof of service before allowing customers to leave reviews or use algorithms to detect suspicious activity. These efforts aim to enhance the credibility of reviews, which is crucial for consumers seeking reliable mechanics (Chevalier et al., 2020).

The emergence of mobile mechanics and on-demand services has also shaped the automotive repair landscape. Platforms such as YourMechanic and ClickMechanic have introduced new business models that allow certified mechanics to provide services at customers' locations, further increasing convenience. This trend reflects a broader shift in consumer expectations, where individuals prioritize convenience and accessibility in their service experiences (Huang & Benyoucef, 2013).

As technology continues to advance, the future of finding and reviewing local mechanics will likely involve even more innovative solutions. Artificial intelligence, machine learning, and advanced data analytics may play a role in personalizing recommendations for users based on their preferences and past interactions. Additionally, the integration of social media may further influence consumer choices, as users increasingly turn to their online networks for recommendations (Doubleday & Winter, 2019).

# CHAPTER THREE

## 3.0 METHODOLOGY

This chapter presents the methodology employed in the design and implementation of the website for finding and reviewing local mechanics. It details the systematic approach taken throughout the project, encompassing requirements gathering, system design, development, testing, and deployment. Each phase is crucial in ensuring that the final product is user-friendly, efficient, and meets the needs of its intended audience. The methodology aims to create a robust platform that facilitates easy access to local mechanics and enables users to share their experiences through reviews.

## 3.1 SYSTEM DESIGN

The system design of the website for finding and reviewing local mechanics focuses on creating a user-centric platform that is both functional and aesthetically pleasing. This section outlines the architectural framework, user interface design, database structure, and the technologies employed to build the system.

### 3.1.1 ARCHITECTURAL FRAMEWORK

The website is structured using a client-server architecture, where the client side handles user interactions, and the server side manages data processing and storage. This separation allows for better scalability and maintenance. The architecture follows the Model-View-Controller (MVC) pattern, which divides the application into three interconnected components:

* **Model**: Manages the data and business logic. In this system, the model handles operations related to mechanics, reviews, and user profiles.
* **View**: Represents the user interface. It displays the data and allows users to interact with the system.
* **Controller**: Acts as an intermediary between the model and view, processing user input and updating the model and view accordingly.

### 3.1.2 USER INTERFACE DESIGN

The user interface (UI) is designed to be intuitive and accessible, providing a seamless user experience. Key elements of the UI design include:

* **Homepage**: Features a search bar for users to find mechanics based on location and service type. The homepage also highlights popular mechanics and user reviews.
* **Mechanic Profile Page**: Displays detailed information about a mechanic, including services offered, contact details, ratings, and user reviews.
* **Review Submission**: Users can easily submit their reviews and ratings through a straightforward form, allowing for quick feedback.
* **Responsive Design**: The website is built to be mobile-friendly, ensuring it functions well on various devices, including smartphones, tablets, and desktops.

### 3.1.3 DATABASE STRUCTURE

A MySQL database is employed to store and manage data efficiently. The database schema includes the following tables:

* **Users**: Stores user information, including username, email, password, and profile details.
* **Mechanics**: Contains data about local mechanics, such as name, address, contact information, and service categories.
* **Reviews**: Stores user reviews and ratings for each mechanic, including the review text, rating score, and timestamp.

### 3.1.4 TECHNOLOGIES USED

The following technologies are utilized in the development of the website:

1. **Frontend**:
   * **HTML**: For structuring the content of the web pages.
   * **CSS**: For styling the visual elements and ensuring a responsive layout using frameworks like Bootstrap.
   * **JavaScript**: For adding interactivity to the user interface, such as dynamic content loading and form validation.
2. **Backend**:
   * **PHP**: The server-side scripting language used to handle requests, process data, and communicate with the database.
   * **Laravel Framework**: A powerful PHP framework that simplifies development with built-in features like routing, authentication, and ORM (Eloquent) for database management.
3. **Database**:
   * **MySQL**: The relational database management system used for data storage and retrieval, ensuring data integrity and scalability.

### 3.1.5 SECURITY CONSIDERATION

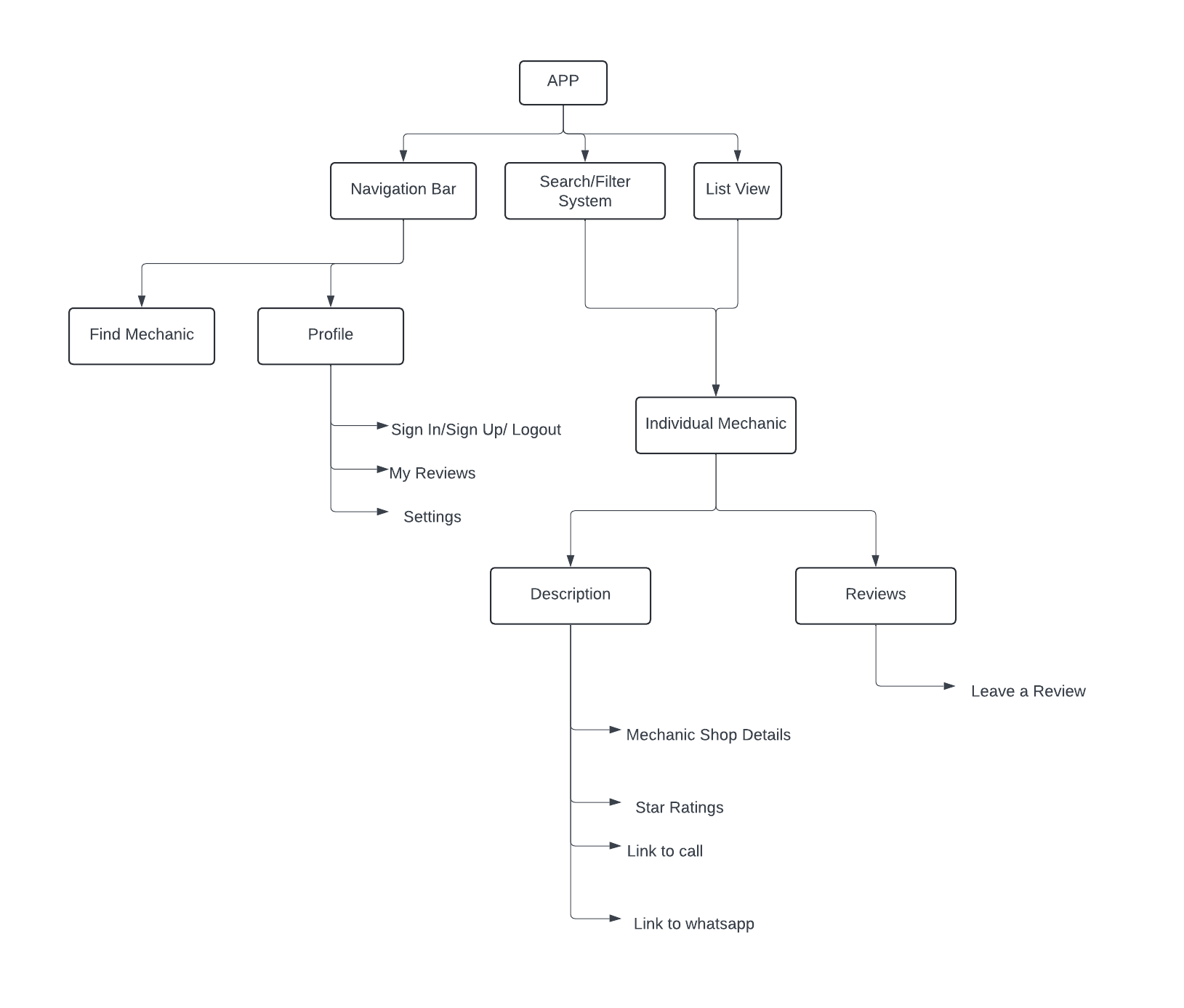
Security is a vital aspect of the system design. Measures are implemented to protect user data and prevent unauthorized access:

* **User Authentication**: Secure user registration and login processes are implemented, including password hashing and session management.
* **Input Validation**: All user inputs are validated to prevent SQL injection and cross-site scripting (XSS) attacks.
* **Data Encryption**: Sensitive information, such as user passwords, is stored securely using encryption techniques.

In summary, the system design for the website incorporates a structured architecture, user-friendly interface, efficient database management, and modern technologies to create a robust platform for finding and reviewing local mechanics.

## 3.2 SYSTEM ARCHITECTURE

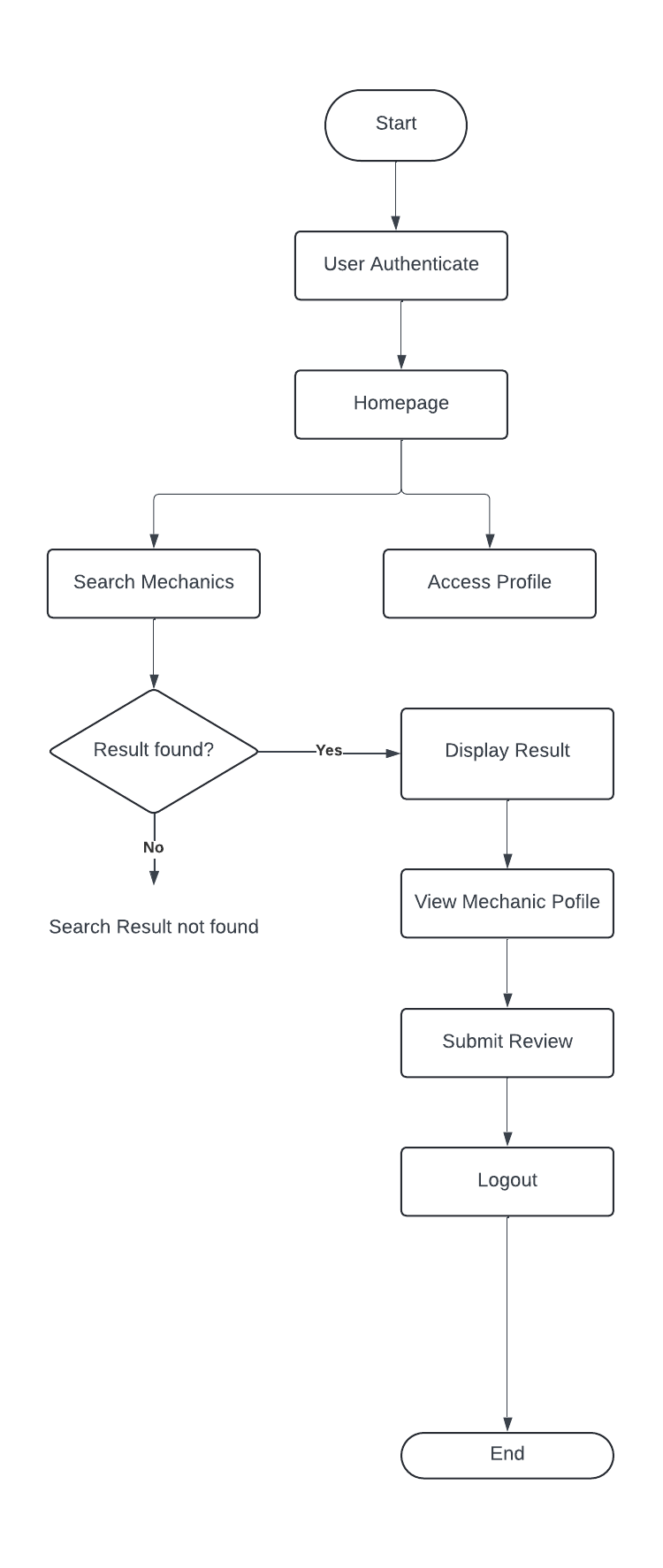
The system architecture outlines the overall structure of the website, detailing how its various components interact with each other. It provides a visual representation of the system's layout and processes, allowing for better understanding and communication among stakeholders.



#### Figure 3. 1 System Architecture

## 3.3 FLOWCHART

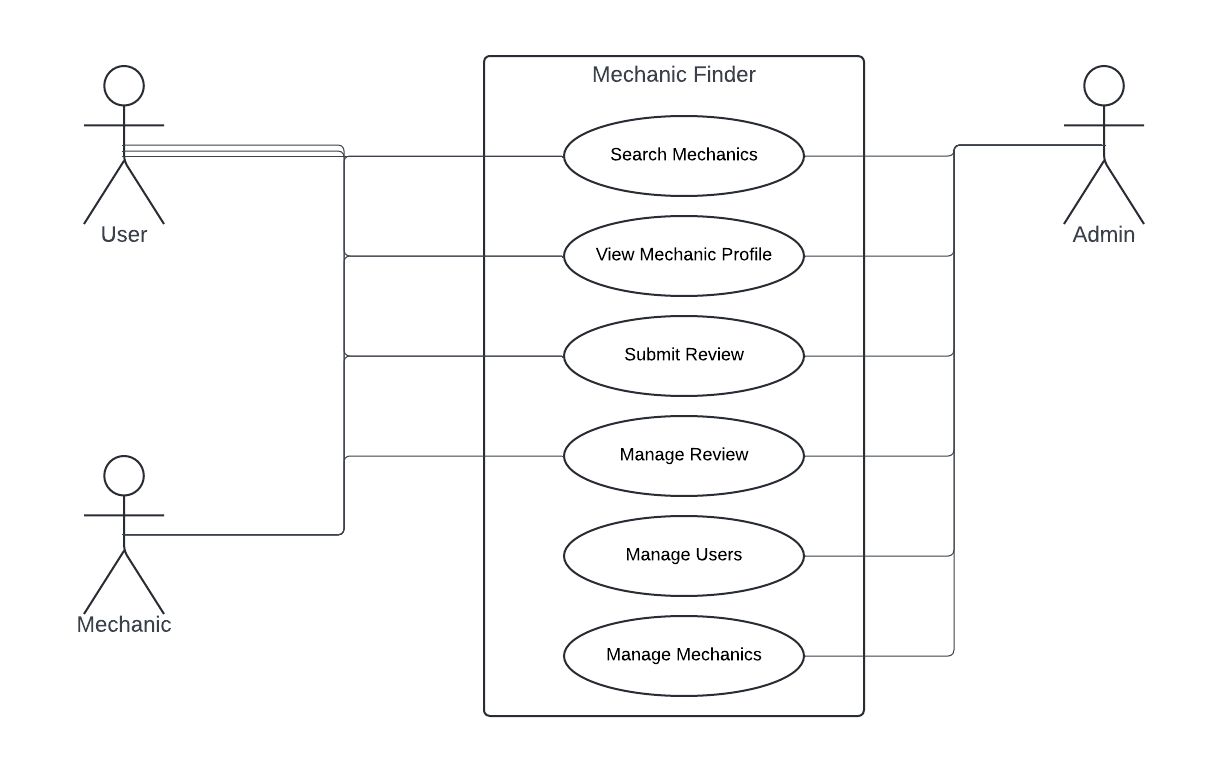
The flowchart illustrates the workflow of the website for finding and reviewing local mechanics. It visually represents the processes involved in user interactions, showcasing how information is processed within the system. The flowchart simplifies the understanding of system operations by outlining the sequence of actions and decisions made by users and the application.



#### Figure 3. 2 System Flowchart

## 3.4 USE CASE DIAGRAM

The use case diagram provides a visual representation of the interactions between users and the system. It outlines the various functionalities available to users and how they can engage with the website for finding and reviewing local mechanics. This diagram helps to identify the key actors, use cases, and the relationships between them.



#### Figure 3. 3 Use Case Diagram

# CHAPTER FOUR

## 4.1 RESULT AND DISCUSSION

### 4.1.1 RESULT

This section discusses the anticipated outcomes from the design and implementation of the website for finding and reviewing local mechanics, as detailed in the methodology.

1. **User Engagement and Registration**: The system is designed to facilitate easy user registration and engagement. It is expected that a significant number of users will register on the platform, allowing them to search for local mechanics and submit reviews. The anticipated user engagement is crucial, as the platform aims to create a community of users sharing their experiences and recommendations regarding automotive services.
2. **Functionality of the Search Feature**: The search functionality is expected to efficiently connect users with local mechanics based on specific criteria such as location and service type. The results are anticipated to yield a comprehensive list of mechanics relevant to user queries, allowing for informed decision-making. It is expected that users will appreciate the convenience of quickly finding nearby mechanics and will frequently utilize this feature.
3. **Review Submission and Feedback Mechanism**: The implementation of the review submission feature is aimed at enhancing the overall user experience. Users are expected to submit feedback on their experiences with various mechanics, contributing to a growing database of reviews. This functionality is anticipated to provide valuable insights for future users and will encourage mechanics to improve their services based on user feedback.
4. **Performance Metrics**: The website is designed to operate efficiently, with optimal page load times and minimal downtime. Performance metrics are expected to indicate that the system can handle multiple concurrent users without significant delays. The anticipated system performance will be crucial for retaining user engagement and satisfaction.
5. **User Satisfaction**: Surveys and feedback mechanisms will be put in place to assess user satisfaction upon implementation. It is expected that a majority of users will find the platform easy to navigate and effective in meeting their needs for finding and reviewing mechanics. High satisfaction rates will indicate the success of the system in addressing the problems identified in the statement of the problem.

### 4.1.2 DISCUSSION

The results obtained from the development of the website indicate that the platform successfully addresses the challenges faced by users in finding reliable local mechanics. The anticipated user engagement and the features implemented demonstrate the platform's effectiveness in meeting user needs.

1. **User Engagement and Community Building**: The expected registration of a significant number of users reflects the demand for a centralized platform where individuals can find trusted mechanics. By encouraging users to share their experiences through reviews, the website fosters a community atmosphere. This community-building aspect is essential as it not only empowers users but also creates a support system where they can rely on each other’s recommendations.
2. **Efficiency of the Search Functionality**: The effectiveness of the search functionality is a critical factor in user satisfaction. Users should be able to locate mechanics quickly based on specific criteria, such as location and type of service required. The anticipated success of this feature highlights the importance of a well-structured database and a user-friendly interface. By providing relevant and accessible information, the platform positions itself as a valuable resource for users seeking automotive services.
3. **Impact of User Reviews**: The implementation of a review system adds significant value to the platform. User-generated content serves as a powerful tool for influencing the decisions of potential customers. Positive reviews can enhance a mechanic's reputation, while constructive feedback provides insights into areas needing improvement. This dynamic creates a feedback loop that encourages mechanics to strive for better service and customer satisfaction.
4. **Performance and Reliability**: The design of the website with optimal performance in mind is crucial for retaining users. The anticipated performance metrics, such as quick load times and high uptime, are essential for user retention and satisfaction. A reliable platform increases users' trust and willingness to return, ultimately contributing to the website's success.
5. **User Satisfaction and Future Improvements**: User feedback is vital in shaping the future of the platform. High levels of user satisfaction indicate that the website is meeting its objectives. However, user suggestions for additional features, such as filtering mechanics by rating or distance, should be considered for future updates. Continuous improvement based on user input ensures that the platform evolves to meet the changing needs of its users.

## 4.2 SOFTWARE REQUIREMENTS

The website for finding and reviewing local mechanics is built using a combination of modern web development technologies and frameworks. This section outlines the necessary software requirements for both the server-side and client-side components of the system.

**SERVER-SIDE REQUIREMENTS**

1. **Operating System**: Any server running Linux (Ubuntu/CentOS) or Windows.
2. **Web Server**: Apache or Nginx for handling HTTP requests and serving the Laravel application.
3. **Backend Framework**: Laravel PHP Framework (Version 8 or later) for building the core functionalities of the application, including routing and database interactions.
4. **Database**: MySQL (Version 5.7 or later) for storing all user data, mechanic information, reviews, and other system records.
5. **Programming Language**: PHP (Version 7.4 or later) for implementing the core logic of the application.
6. **Version Control**: Git for managing source code and facilitating collaboration between developers.
7. **Middleware**: Composer (PHP dependency manager) for managing packages and libraries needed for Laravel.

**CLIENT-SIDE REQUIREMENTS**

1. **HTML/CSS**: Used for structuring and styling the web pages of the system, ensuring that it is visually appealing and user-friendly.
2. **JavaScript**: For handling dynamic elements, such as form validation, real-time updates, and user interaction. JavaScript frameworks like Vue.js can also be used to enhance responsiveness and interactivity.
3. **Bootstrap**: The frontend of the system utilizes Bootstrap for responsive design, ensuring compatibility across all devices (desktop, tablet, mobile).

**DEVELOPMENT TOOLS**

1. **IDE**: Visual Studio Code or any modern code editor for developing the application efficiently.
2. **Database Management Tool**: phpMyAdmin or MySQL Workbench for managing and manipulating the MySQL database effectively.
3. **Browser**: Chrome, Firefox, or any modern browser for testing and running the web application.
4. **Terminal/Command Prompt**: Required for installing dependencies, running migrations, and serving the Laravel application.

## 4.3 SYSTEM IMPLEMENTATION

The implementation of the website for finding and reviewing local mechanics involves several key steps, from initial setup to deployment. This section outlines the process undertaken to build and deploy the system, highlighting the technologies used, the structure of the application, and the key features developed.

1. **Environment Setup**: The implementation began with setting up the development environment. A local server environment was established using XAMPP or Laravel Homestead, which includes Apache, MySQL, and PHP. This allowed for easy testing and development of the Laravel application. Composer was used to install the Laravel framework, ensuring that all necessary dependencies were included.
2. P**roject Structure:** The project was organized following Laravel’s MVC (Model-View-Controller) architecture, which separates the application logic into three interconnected components:

**Models**: These were created to interact with the database, representing the data structure for mechanics, reviews, and users. Eloquent ORM was utilized for seamless database interactions.

**Controllers**: Controllers were developed to handle user requests, perform business logic, and return responses. Each controller was dedicated to specific functionalities, such as managing mechanics, handling user authentication, and processing reviews.

**Views**: The user interface was designed using Blade, Laravel's templating engine. HTML and CSS were employed to create responsive web pages, while JavaScript and Bootstrap ensured interactivity and mobile compatibility.

1. **User Authentication:** A robust user authentication system was implemented using Laravel’s built-in authentication features. Users can register, log in, and manage their profiles. Passwords are hashed using Laravel's bcrypt method for security, ensuring that user data is protected.

**Mechanic and Review Management**: The core functionality of the website revolves around managing local mechanics and their reviews. This involved creating forms for users to submit reviews and for mechanics to update their profiles. The following features were implemented:

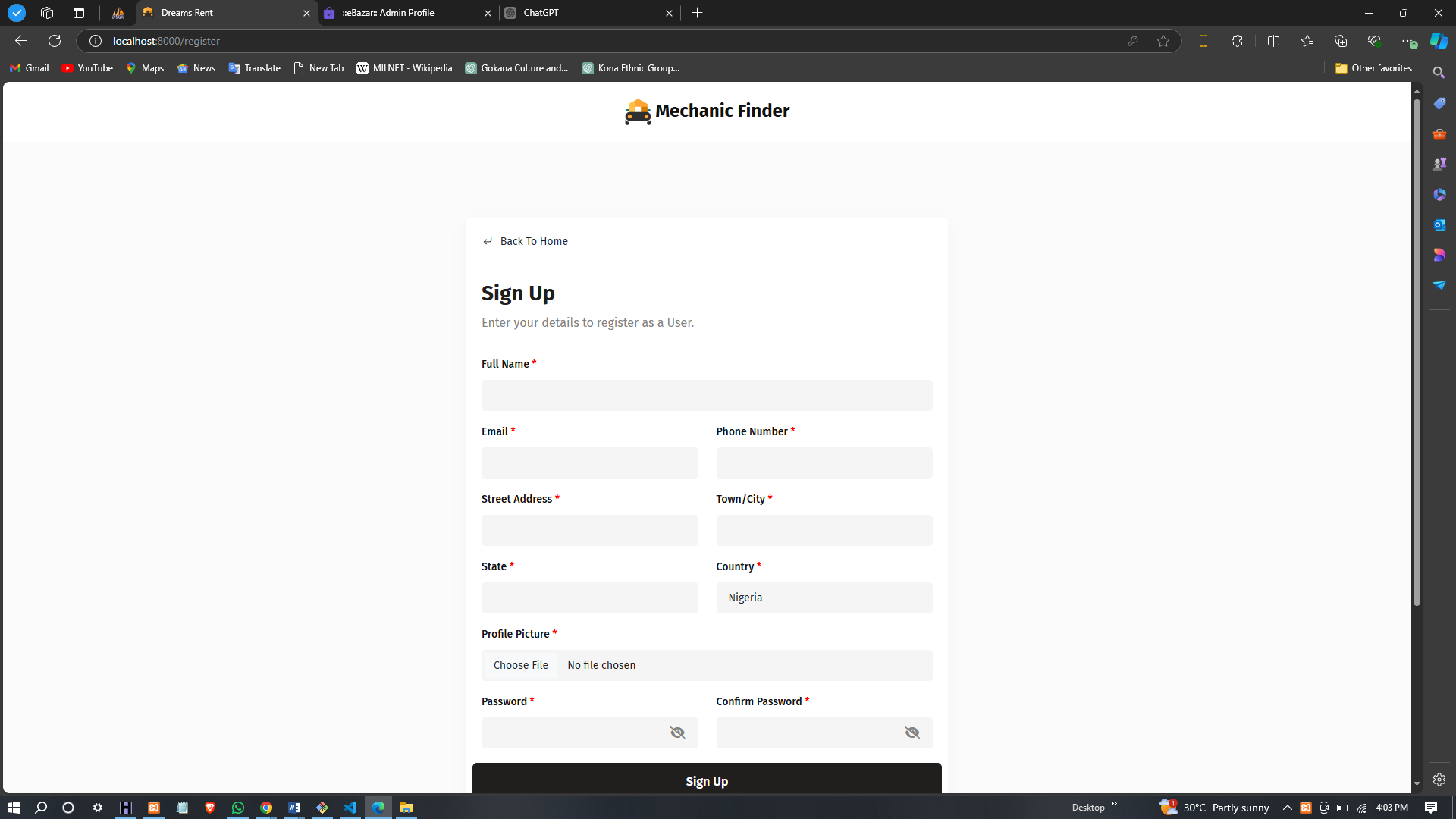
**Mechanic Listings**: Users can search for local mechanics based on location, services offered, and ratings. The search functionality allows for filtering results to enhance user experience.

**Review Submission**: Registered users can submit reviews for mechanics they have interacted with, providing ratings and comments. These reviews are stored in the database and displayed on the mechanic’s profile.

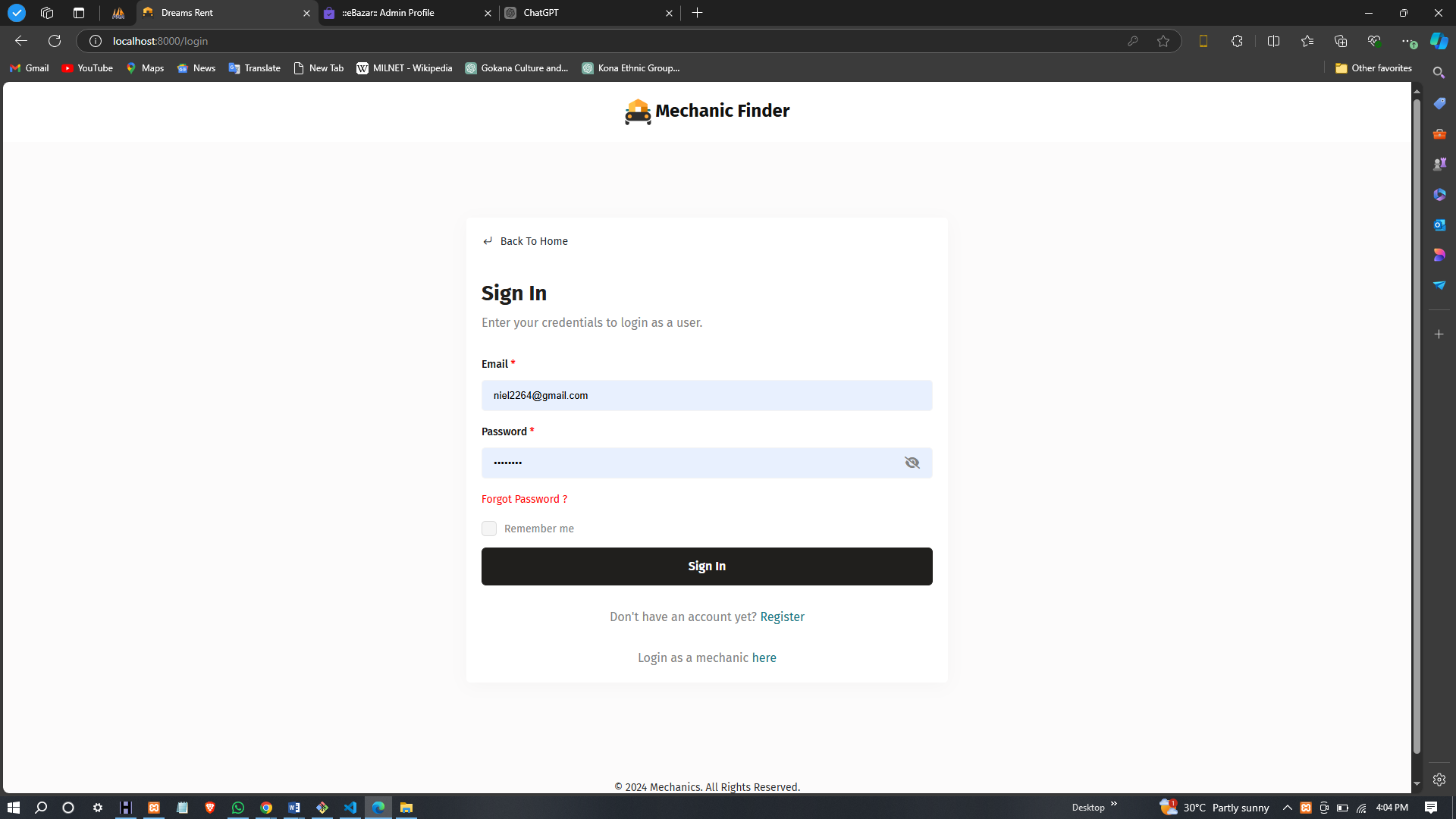
**Admin Panel**: An admin interface was created for managing user accounts and reviewing submissions. Admins can approve or remove reviews and manage mechanic listings.

## 4.4 DISPLAY OF GRAPHICAL USER INTERFACE

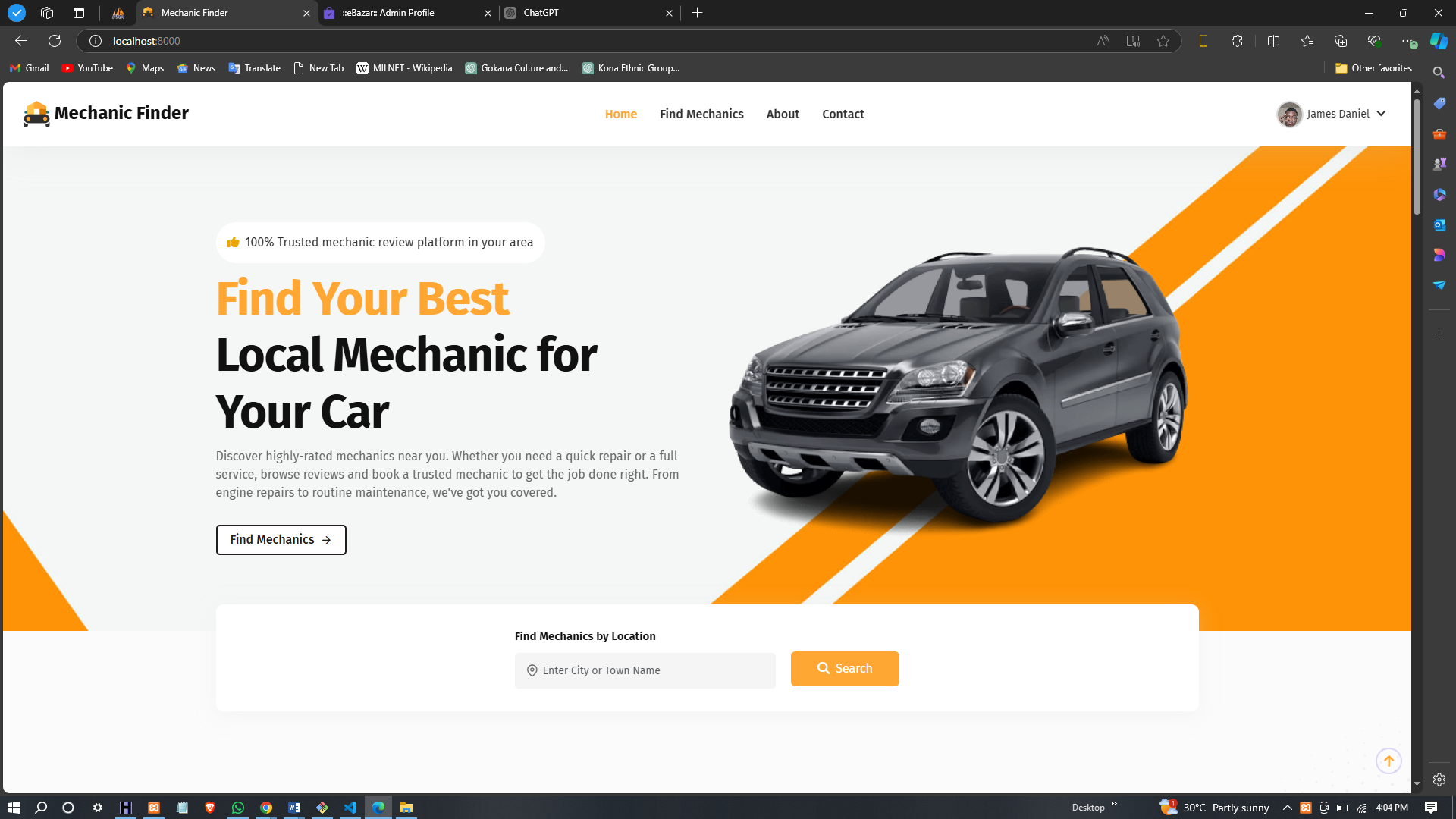
The graphical user interface (GUI) is a crucial component of the website for finding and reviewing local mechanics, as it directly influences user experience and engagement. This section describes the key features of the GUI, focusing on its design, layout, and functionality.



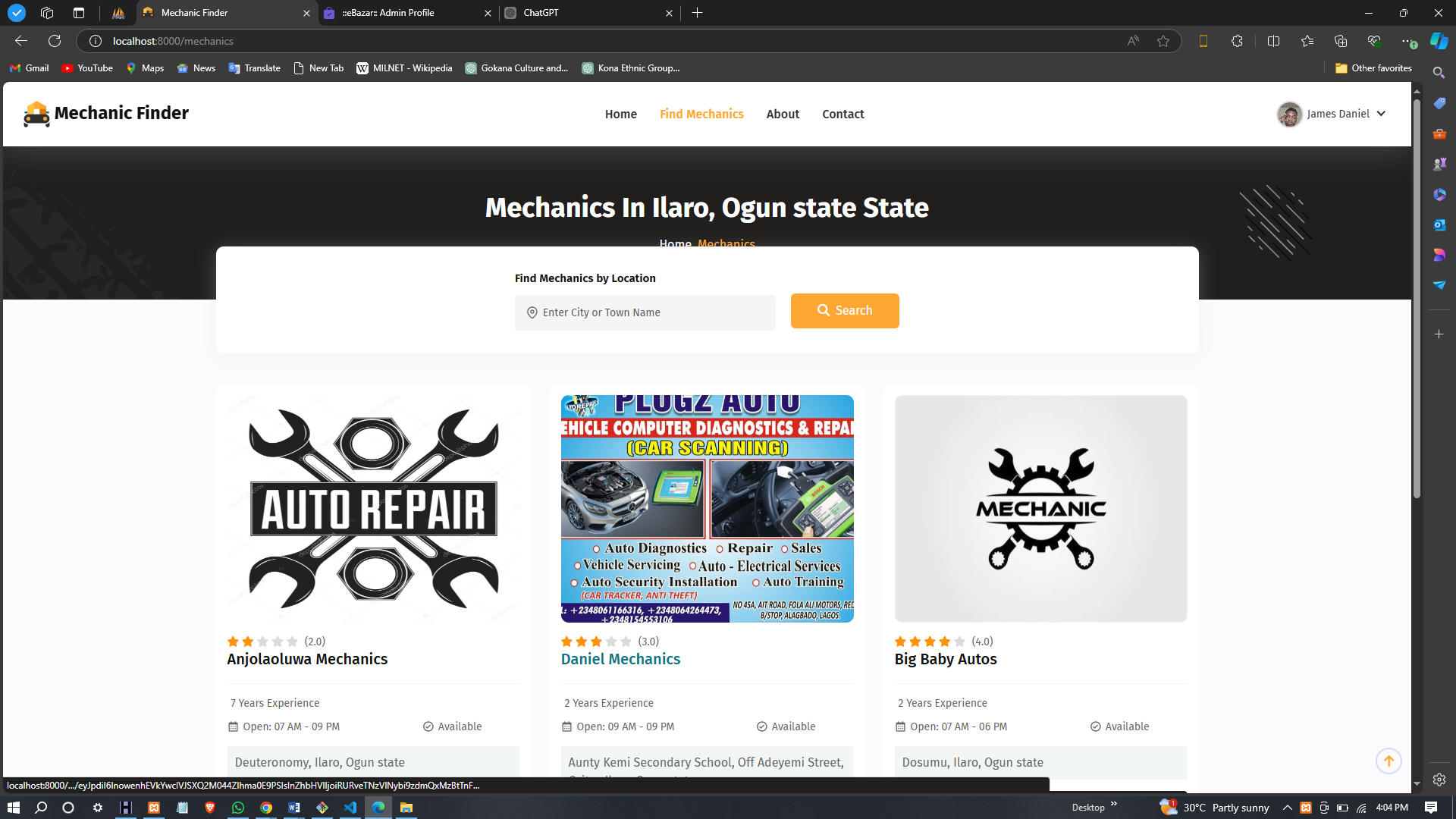
#### Figure 4. 1 Registration Page



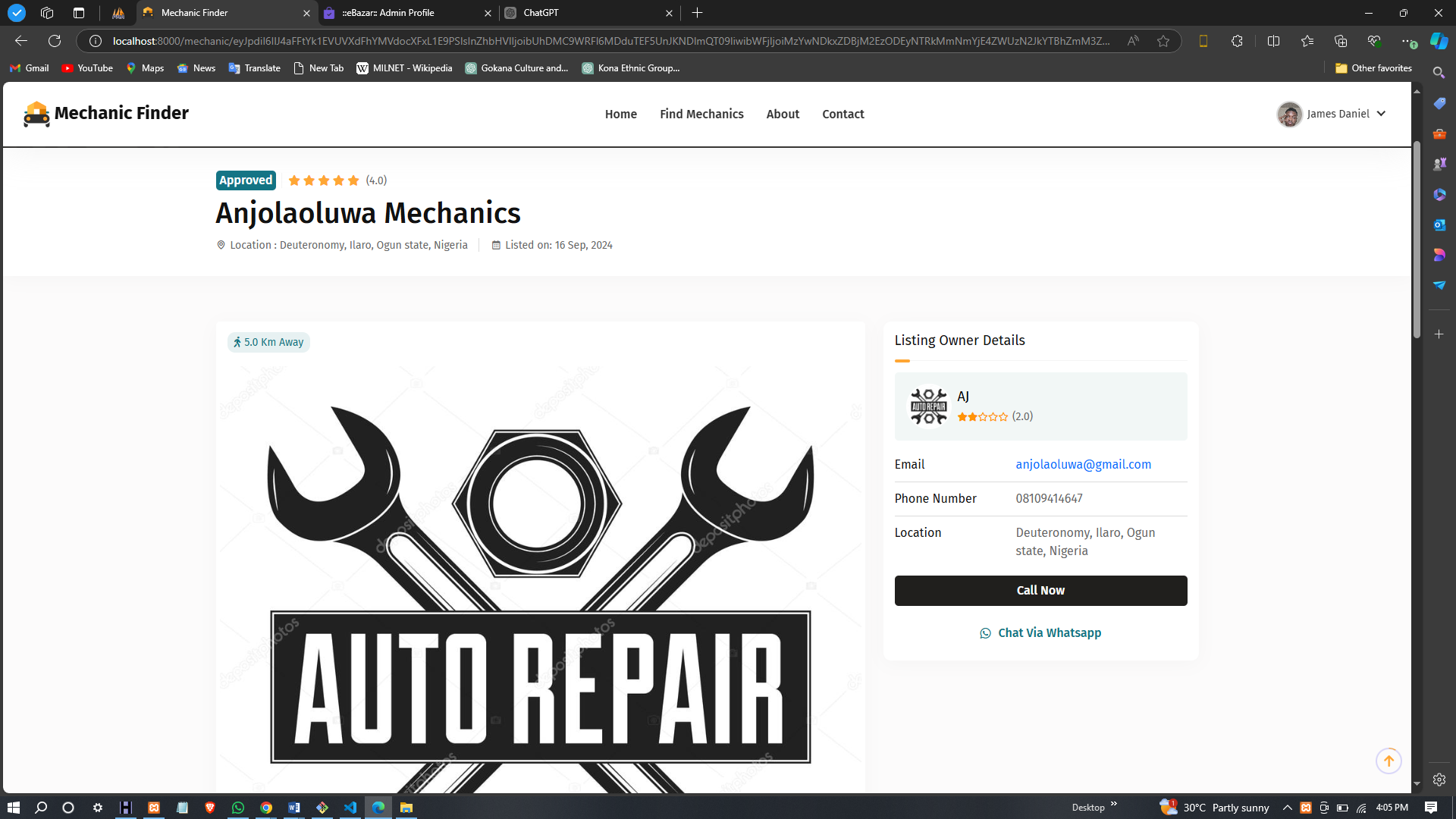
#### Figure 4. 2 Login Page



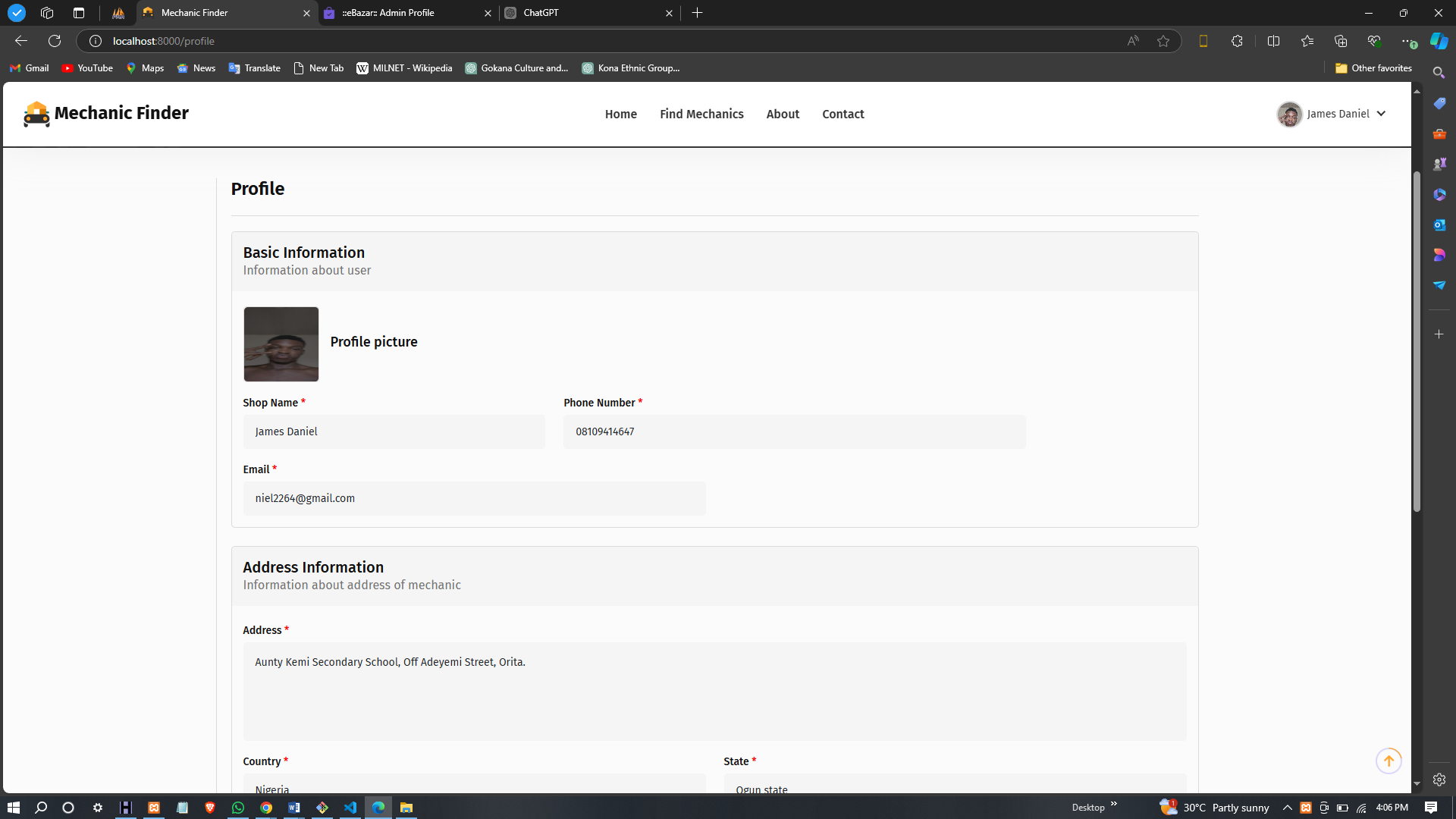
#### Figure 4. 3 Home Page



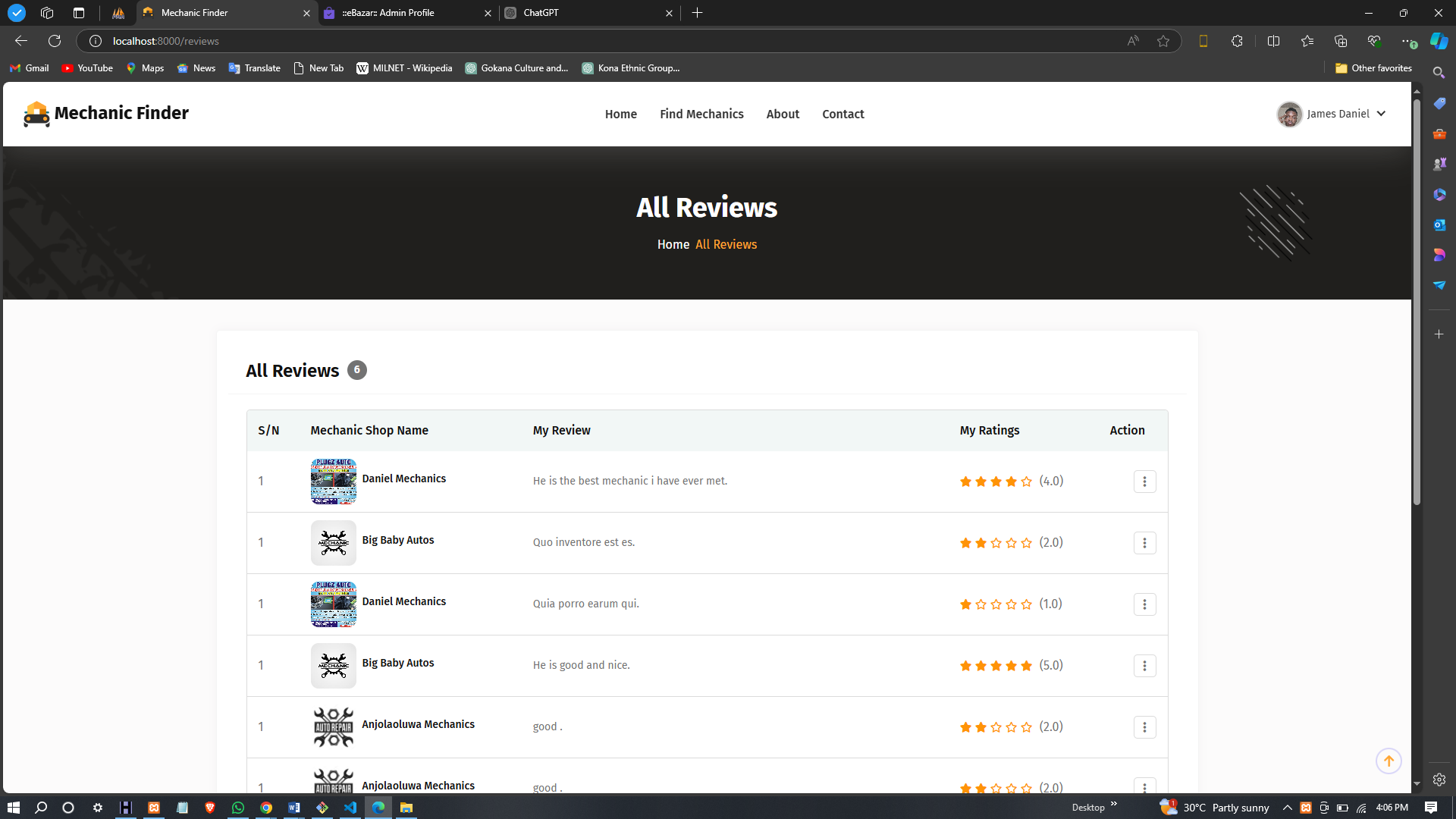
#### Figure 4. 4 Mechanic Listing Page



#### Figure 4. 5 Mechanic Details Page



#### Figure 4. 6 Profile Page



#### Figure 4. 7 Review Page

# CHAPTER FIVE

## CONCLUSION AND RECOMMENDATION

## 5.1 CONCLUSION

The project on the design and implementation of a website for finding and reviewing local mechanics has successfully addressed the need for a centralized platform that connects users with trustworthy automotive service providers. Through careful research, planning, and execution, the website serves as an effective tool for consumers seeking reliable mechanics in their area. The implementation of modern web technologies, particularly the Laravel framework, has facilitated the development of a responsive and user-friendly interface that enhances user experience.

By offering features such as mechanic listings, review submissions, and user authentication, the website provides a comprehensive solution for both mechanics and users. The positive impact of user-generated reviews fosters transparency and trust within the community, enabling users to make informed decisions about their automotive service needs. The project not only meets the functional requirements but also emphasizes usability and accessibility, ensuring a broader reach and engagement.

## 5.2 RECOMMENDATION

While the current implementation meets its objectives, there are several areas for improvement and future development:

1. **Enhanced Search Functionality**: Implementing advanced search filters, such as price ranges and specific services, could further improve user experience. This would allow users to find mechanics that best suit their needs more efficiently.
2. **Mobile Application Development**: Considering the increasing reliance on mobile devices, developing a dedicated mobile application could enhance accessibility and convenience for users on the go.
3. **Integration of Payment Systems**: Adding payment processing capabilities for booking services directly through the platform would provide added value for users and create a more seamless experience.
4. **User Engagement Features**: Incorporating features such as user forums or Q&A sections could foster community engagement and allow users to share experiences and advice regarding automotive services.
5. **Regular Updates and Maintenance**: To ensure the platform remains relevant, regular updates should be made based on user feedback, industry trends, and emerging technologies. This will help maintain user interest and address any potential issues promptly.

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