School of Computer & Information and Technology

Final Year Project

Proposal Development

Group Members:

Ali Sher (F2020-158)

Nouman Ali (F2020-149)

Mian Faizan Munawer (F2020-148)

Proposal #1: Recycling Revolution Mobile App “Saaf Pakistan”

Problem: Pakistan, like many other countries, lacks a structured recycling system, with no concept of separate blue bins for recyclable materials. As a result, individuals and businesses indiscriminately dispose of all types of waste together, contributing to the worsening of environmental pollution and the accumulation of recyclables in landfills. This haphazard waste management approach not only worsens environmental pollution but also hinders the sustainable utilization of valuable recyclable resources.

Solution: We propose the development of a mobile application called "Saaf Pakistan - Recycling Revolution" to address the critical issue of unorganized waste disposal and promote responsible recycling practices across the country.

Key Features:

Recycling Hub for Pakistan: Saaf Pakistan will serve as a centralized hub for all recycling needs, catering to both individual users and businesses.

1. Subscription and Pay-As-You-Go Models: Users can subscribe for regular recyclable pickups or request pickups as needed.
2. Recycle Pickup Scheduling: Convenient scheduling of recyclable pickups.
3. Recyclable Details: Users provide information about the type and quantity of recyclables.
4. Recycling Education: Access to informative resources on recycling practices.
5. AI-Powered Recycling Insights: AI generates recycling reports, showcasing users' environmental impact.
6. Compensation: Users receive payment based on the amount of recycling they contribute, creating a financial incentive for responsible waste management.
7. Customized Recycling Plans: Tailored recycling solutions for businesses of all sizes.
8. Recycling Performance Metrics: Detailed reports on recycling efforts, helping users and businesses track their environmental impact.

Technical Expertise Source: For the technical aspects of this project, our expertise will be sourced from online developer communities and resources such as Stack Overflow, GitHub, and relevant forums for technical guidance and problem-solving.

Domain Expertise Source: For Domain Expertise, we will leverage the knowledge and insights of experts in the recycling industry, including scrap collectors such as “Cheema-Metal-Scrap” and “Warraich Scrap Dealer”, who have extensive experience in handling and processing recyclable materials. Their expertise will be invaluable in understanding the intricacies of the recycling process and ensuring the effectiveness of our app in meeting the industry's needs.

Data Source: We will gather data on recycling trends, material prices, and environmental impact metrics from local scrap collectors like “Cheema-Metal-Scrap” and “Warraich Scrap Dealer”, as well as industry reports. User data, such as recycling habits and compensation records, will be securely stored in our database.

Proposal #2: Mobile App for Vehicle Service “CarKaam”

Problem Statement

Many Automobile owners face difficulties in finding a reliable and convenient source for repair and maintenance of their vehicles. They face problems such as long waiting times, Inconsistent Quality of work, Struggle to find nearby workshops and limited information about the range of the services provided by the workshops.

Proposed Solution

Our proposed solution is to develop an innovative mobile application that connects customers with a network of reputable car workshops. This app will address the identified problems by offering the following key features:

1. Workshop Discovery: Users can easily discover nearby car workshops based on location.
2. Comprehensive Workshop Information: Users will have access to detailed information about workshops, including services offered and areas of expertise.
3. Quality Assurance: Implement a rating and review system, allowing users to make informed decisions by assessing the reputation of workshops based on feedback from other customers.
4. Efficient Booking: Our app will simplify the appointment scheduling process, making it quick and hassle-free for users.
5. Secure Payments: Secure digital payment options will be provided, ensuring payment security and convenience for customers.
6. Real-time Updates: The app will provide real-time updates on the status of the vehicle's repair or maintenance work.

Technical Expertise Source: For the technical aspects of this project, our expertise will be sourced from online developer communities and resources such as Stack Overflow, GitHub, and relevant forums for technical guidance and problem-solving.

Domain Expertise Source: For Domain Expertise, we will collaborate with experts in the automotive industry, including mechanics and workshop owners. In addition to these experts, we will also engage with local auto workshops such as "Bismillah Auto Workshop" and "Hafiz Auto Workshop" to gain valuable insights into the specific challenges and requirements of the local automotive service sector. Their expertise will help us tailor our app to meet the unique needs of both customers and workshop owners.

Data Source: We will collect and maintain data on car workshops, their services, pricing structures, and customer feedback. We will source this data through partnerships with workshops like "Bismillah Auto Workshop" and "Hafiz Auto Workshop," as well as user-entered content. These workshops will provide us with up-to-date information on their services and pricing, and customer feedback will be used to continuously improve the quality of services offered through the "CarKaam" app.

Proposal #3: Dairy Farm Management System

Problem Statement:
Dairy farms often face significant problems in managing their operations efficiently, such as: Difficulty in accurately tracking and managing the inventory of dairy products, raw materials, and equipment, resulting in wastage and stockouts, and Cumbersome manual record-keeping processes for cow health, breeding, and vaccination schedules, which are prone to errors and inefficiencies.

Solution:

To address these challenges, we propose the development of a comprehensive Dairy Farm Management System (DFMS) that integrates advanced technology and software solutions. The DFMS will provide the following key features and benefits:

Inventory Management:

- Real-time inventory tracking system.
- Manages dairy product stock levels.
- Efficiently handles raw material orders.
- Alerts farm managers when restocking is required.
- Reduces wastage and ensures product availability.

Record Keeping:

- Replaces manual record-keeping with a digital system.
- Captures and stores essential data related to cow health, breeding, and vaccinations.
- Enables easy retrieval and analysis of historical data for informed decision-making.

Technical Expertise Source: For the technical aspects of this project, our expertise will be sourced from online developer communities and resources such as Stack Overflow, GitHub, and relevant forums for technical guidance and problem-solving.

Domain Expertise Source: For Domain Expertise, we will collaborate with experts in the dairy industry, which includes dairy farm owners. Additionally, we will engage with local dairy farms, such as "TNS Dairies," to gain valuable insights into the specific challenges and requirements of the local dairy farming sector. Their expertise will help us tailor our Dairy Farm Management System to meet the unique needs of dairy farm owners.

Data Source: We will gather data on farm trends, material prices, and environmental impact metrics from local dairy farms like "TNS Dairies." This partnership will provide us with up-to-date information on industry trends and pricing, and data related to the environmental impact of dairy farming practices. Additionally, we will utilize data from our partner farms to ensure that our DFMS addresses the real-world needs and challenges faced by dairy farmers.

Proposal #4: Online Legal Consultation App Easy Wakeel

Problem Statement

Many individuals and businesses require legal assistance but often find it challenging to connect with the right lawyer for their specific needs. The traditional process of searching for a lawyer can be time-consuming, overwhelming, and lacks efficient matchmaking capabilities. This problem is especially prevalent for people who are not well-versed in legal matters and may struggle to identify the appropriate type of lawyer for their case.

Proposed Solution

Our proposed solution is to develop a user-friendly mobile application that simplifies the process of booking a lawyer online and provides AI-driven recommendations based on the brief description of the case provided by the client. This application will serve as a bridge between clients seeking legal assistance and lawyers looking to offer their services.

Key features of the application will include:

1. User Registration and Profile Creation: Clients can create profiles and input information about their legal needs.
2. Lawyer Database: A comprehensive database of lawyers from various legal domains will be maintained, along with their expertise and availability.
3. AI Recommendation System: Utilizing Natural Language Processing (NLP) and machine learning algorithms, our system will analyse the client's case description and recommend the most suitable lawyers.
4. Booking and Appointment Management: Clients can book appointments with lawyers directly through the app, view lawyer profiles, and schedule consultations.
5. Secure Communication: A secure chat and video conferencing system will facilitate communication between clients and lawyers.
6. Rating and Feedback System: Clients can provide feedback and ratings after their consultation, helping others make informed choices.

Technical Expertise Source: For the technical aspects of this project, our expertise will be sourced from online developer communities and resources such as Stack Overflow, GitHub, and relevant forums for technical guidance and problem-solving.

Domain Expertise Source: For Domain Expertise, we will collaborate with experts in the legal industry, including experienced lawyers such as “Adv. Ameer Hamza Cheema”, “Adv. Asad Cheema”, and legal professionals from “Rana Associates”. Their insights and experience in the legal field will be invaluable in understanding the specific requirements and challenges of the legal consultation process.

Data Source: Lawyers themselves, including “Adv. Ameer Hamza Cheema”, “Adv. Asad Cheema”, and “Rana Associates”, will have the option to create profiles on our platform, providing information about their expertise, qualifications, and availability. This self-reported data will be verified for accuracy and used to populate the lawyer database on our platform, ensuring that clients have access to a comprehensive and reliable resource for legal consultations.

Rejected Ideas

1. AI-based Laptop Recommendation System: Utilizes AI algorithms to recommend laptops tailored to individual user preferences and needs.

2. CV Classifier: CV classification for company recruiters automates resume screening and skill matching to efficiently identify qualified candidates.

3. Flight Management System: A comprehensive software suite for airline operations, covering flight scheduling, crew management, and passenger services.

4. Clinic Management System: Streamlines the administration and operations of medical clinics, including appointment scheduling, patient records, and billing.

5. Online Gardener: A virtual gardening assistant that offers advice, plant care tips, and personalized recommendations for gardening enthusiasts.

6. Augmented Reality Furniture Store: An AR application allowing customers to visualize furniture in their homes before making a purchase.

7. AI Personal Gym Trainer: Uses AI to create customized workout plans and provide real-time feedback and guidance during workouts.

8. AI-based Mobile Recommendation System: Recommends mobile phones based on user preferences, budget, and performance requirements.

9. Virtual Fashion Stylist: An AI stylist that helps users choose clothing and outfits based on personal style preferences, fashion trends, and occasion.

10. Virtual Reality Education Platform: A VR-based educational platform that offers immersive learning experiences across various subjects.

11. Community Carpooling Network: An app that connects neighbors and coworkers for carpooling, reducing traffic congestion and carbon emissions.

12. Art Marketplace: An online marketplace dedicated to promoting and selling handmade and locally crafted products, supporting local artisans and reducing carbon emissions from shipping.

13. Local Farmers' Market App: An app that connects consumers with nearby farmers' markets, providing information on available produce, vendor details, and event schedules.

14. Call center management system: A call center management system streamlines call routing, tracks agent performance metrics, and efficiently manages call queues for enhanced customer service.

15. School management system: A school management system is a comprehensive software solution that automates administrative tasks, manages student records, and facilitates communication among teachers, students, and parents for efficient school operations.