Project Track 1 Stage 1
Team 047 - Join_The_Party

Project Title: HandyIllinois - Connecting Homeowners with Reliable Handyperson Services

Summary:
HandyIllinois is a website that will connect homeowners in Illinois with reliable and affordable handyperson services. Our team has collected real-world datasets from Illinois handyperson service agencies and Illinois handyperson work orders to create a one-stop solution that will make the process of finding, booking, and managing handyperson services, easy and convenient. The platform is a comprehensive system for homeowners as well as handypersons and their agencies. Homeowners can easily search for skilled professionals, book services, and provide reviews. Handypersons can easily accept or reject the service request assigned to them by the agency. They can even connect with the customer to know the exact scale of the service they have asked for. The system will help them get noticed among their peers and the agency with the help of ratings provided by the customers.

HandyIllinois is a data-driven solution with a primary objective of enhancing the overall service experience for customers, handypersons, and agencies. These features will not only help homeowners provide multiple options to search, filter, and select which handyperson professional to employ but also empower handyperson agencies to grow their businesses efficiently and sustainably.

Description:
HandyIllinois aims to tackle the challenge of finding reliable handyperson services that are affordable and trustworthy, for home repairs and upkeep tasks. Homeowners often struggle to locate qualified service providers who efficiently and cost-effectively address their maintenance requirements. Our application offers a user-friendly platform that links homeowners with screened handyperson services based on their location, expertise, and availability by streamlining the process of searching, booking, and reviewing handyperson services. HandyIllinois simplifies what can sometimes be a frustrating and time-consuming process for homeowners.

Furthermore, the application seeks to empower handyperson professionals and their agencies by providing tools to manage their work orders effectively, track their performance metrics, and grow their client base. By offering insights into market demand, customer preferences, and customer reviews, HandyIllinois will help service providers optimize their offerings and improve

their service quality. We aim to create a win-win situation where homeowners receive high-quality services, and handyperson agencies can build successful, sustainable businesses.

Creative Component:

A sophisticated interactive visualization dashboard that simplifies complex data into easily understood insights is the cornerstone of HandyIllinois' creative component. Users (homeowners and handyperson agencies) can easily investigate trends and patterns with the help of dynamic graphs, heat maps, and interactive charts. For instance, service providers can visualize their performance metrics over time, identify areas for improvement, and compare their stats against anonymized industry benchmarks.

Usefulness:

HandyIllinois is a handyperson service marketplace designed exclusively for Illinois residents. The multiple features offered on this platform are intended to make the handyperson service process as simple as possible. Whether it's a specific skill set, proximity to a location, or availability, homeowners using the website can quickly search for services based on their needs. Users can set up appointments at any time that works best for them using the booking system. Furthermore, the system of reviews and ratings creates a community of trust and accountability by enabling users to make well-informed decisions based on the experiences of other customers.

HandyIllinois helps handyperson professionals and their agencies run their businesses more efficiently. Service providers are able to monitor their performance metrics and manage work orders efficiently. Although websites like TaskRabbit and Handy are available in a wider market, HandyIllinois sets itself apart by concentrating solely on the Illinois market. Because local factors that may impact handyperson services are taken into consideration, this localized approach enables more accurate and appropriate services.

Realness:

Our team is committed to building a real-world application that delivers tangible value to its users. To achieve this, we have identified several datasets that will form the backbone of our platform. Our major data source is the New York City Handyperson Work Order (HWO) Charges dataset. This comprehensive CSV file contains 93,444 rows and 31 columns, providing a wealth of information about work order details, service types, charges, and completion status. Although this dataset is from New York City, it offers valuable insights into the structure and pricing of handyperson services. We will be transforming the data by performing data engineering so that it can be applied to Illinois. We will also use the Urban Company Customer Service Reviews dataset. This CSV file, containing 220 rows and 5 columns, contains customer

reviews, ratings, and feedback for various handyperson services. By analyzing this data, we can gain insights into customer preferences, common issues, and factors that contribute to high satisfaction rates. We will augment this data by adding even more reviews and performing data engineering to match the data with our previous dataset. We will also be utilizing the Illinois Home Services Placement Agencies Directory and Illinois Professional License Listing Dataset, both available in CSV format. These datasets contain information about agency names, addresses, contact details, and the specific services offered by each agency. This dataset will be useful in populating our platform with local service providers, ensuring that users have access to licensed professionals in their area.

Together, these datasets will allow us to create a robust, data-driven platform that reflects the real-world dynamics of the handyperson service market in Illinois.

<u>Dataset Links</u>:

1. New York City Handyperson Work Order (HWO) Charges (this dataset is of New York city, we are going to engineer the data by modifying the location and other details to the Illinois region)
   ➢ https://data.cityofnewyork.us/Housing-Development/Handyman-Work-Order-HWO-Charges/sbnd-xujn/about_data
   ➢ https://catalog.data.gov/dataset/handyman-work-order-hwo-charges
   ➢ https://www.kaggle.com/datasets/new-york-city/ny-handyman-work-order-hwo-charges?select=handyman-work-order-hwo-charges.csv
2. Urban Company Customer Service Reviews Dataset
   ➢ https://www.kaggle.com/datasets/prajwaldongre/urban-company-customer-service-reviews
3. Illinois Home Services Placement Agencies Directory
   ➢ https://data.illinois.gov/dataset/407idph_home_services_placement_agencies_directory/resource/99db5328-560a-455d-be78-bc1e6fdeb107
4. Illinois Professional License Listing Dataset
   ➢ https://data.illinois.gov/dataset/377idph_asbestos_licensed_professionals/resource/fb02a094-183f-4b2a-9f68-f0fbaf914cd7

<u>Detailed Description of the Functionalities:</u>
   ❖ User Registration and Authentication:
      ➢ Homeowners and service providers can create accounts and log in securely
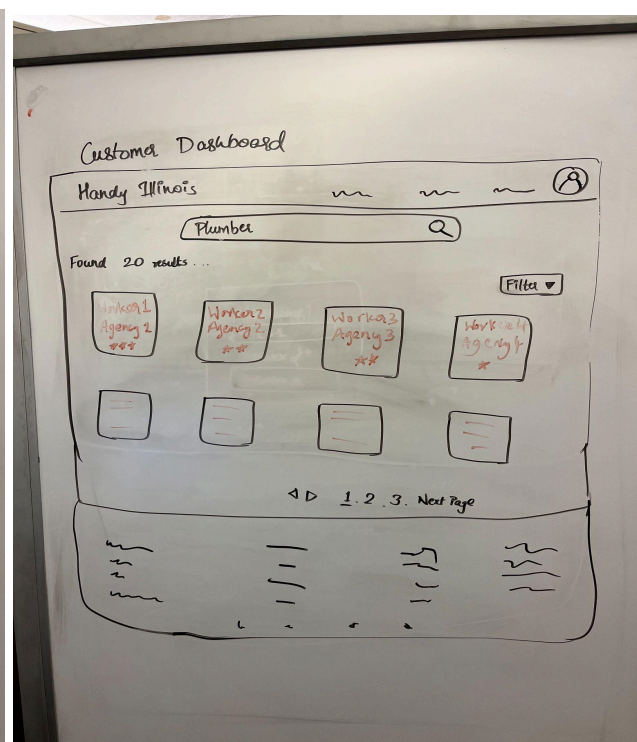   ❖ Service Search and Booking:
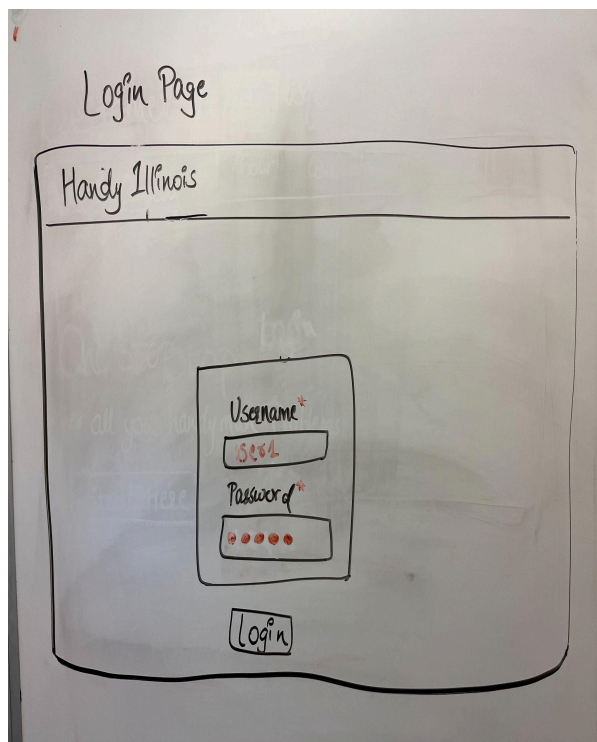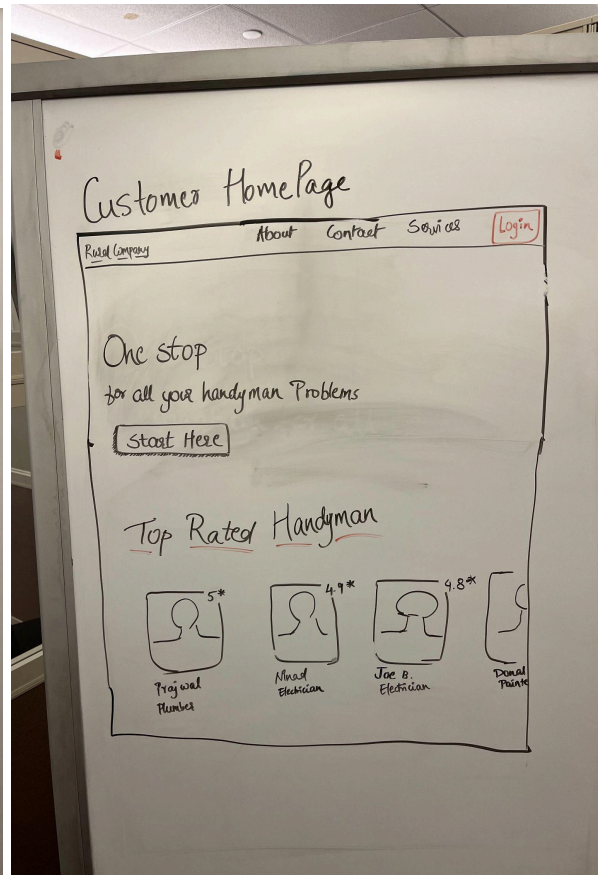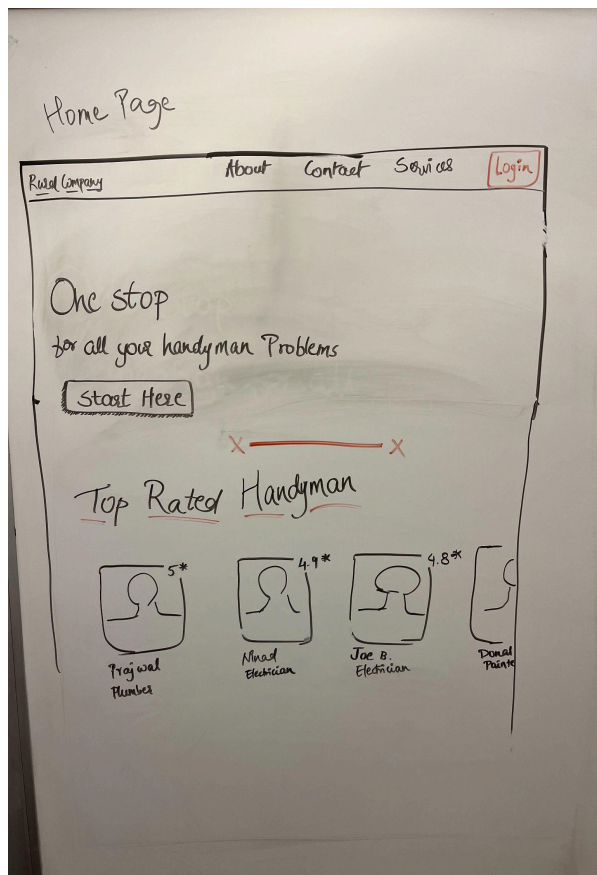
- ➢ Users can search for handyperson services based on location, skill type, and availability
- ➢ Booking system
- ❖ Work Order Management:
  - ➢ Service providers can view, accept, and manage work orders
  - ➢ Status updates for clients
- ❖ Review and Rating System:
  - ➢ Customers can leave reviews and ratings for completed services
  - ➢ Service providers can respond to reviews
- ❖ Performance Analytics:
  - ➢ Service providers can view their performance metrics, including job completion rates and customer satisfaction scores
  - ➢ Interactive dashboard with predictive analytics for service demand and pricing strategies

CRUD Operations:

- ❖ User Registration and Profile Management
  - ➢ Create an account:
    - ■ Users can sign up as either homeowners, handypersons, or service providers
    - ■ Provide basic personal information and contact details
  - ➢ Update profile:
    - ■ Edit personal information
    - ■ Update contact details
  - ➢ Delete account:
    - ■ Option to deactivate or permanently delete their account
- ❖ Homeowner Interactions
  - ➢ Search for services:
    - ■ Use filters to find handymen based on location, skills, time, availability, and ratings
    - ■ View detailed profiles of service providers
  - ➢ Create service requests:
    - ■ Submit detailed job descriptions
    - ■ Upload photos or videos of the issue
    - ■ Specify preferred time slots
  - ➢ Manage bookings:
    - ■ View upcoming and past appointments

- - - Reschedule or cancel bookings
    - Track status of ongoing jobs
  - ➢ Leave reviews and ratings:
    - Rate completed services (1-5 stars)
    - Write detailed reviews
- ❖ Service Provider Interactions
  - ➢ Create and update service listings:
    - List available services and skills
    - Set pricing and availability
  - ➢ Data Visualization Dashboard:
    - Access performance analytics of handy persons.
    - Track customer satisfaction scores
    - Analyze earnings and popular services across platform
- ❖ Handyperson Interactions
  - ➢ Manage work orders:
    - Accept or decline job requests
    - View job details and customer information
    - Update job status (e.g., en route, in progress, completed)
  - ➢ Schedule management:
    - View and manage daily, weekly, and monthly calendars
    - Block out unavailable times

Low-fidelity UI Mockup

Home Page

Rural Company   About   Contact   Services   [Login]

One stop
for all your handyman Problems
[Start Here]

X —————— X

Top Rated Handyman

5*   4.9*   4.8*

Prajwal   Ninad   Joe B.   Donal
Plumber   Electrician   Electrician   Painter

Customer HomePage

Rural Company   About   Contact   Services   [Login]

One stop
for all your handyman Problems
[Start Here]

Top Rated Handyman

5*   4.9*   4.8*

Prajwal   Ninad   Joe B.   Donal
Plumber   Electrician   Electrician   Painter

Login Page

Handy Illinois

Username*
[User1]

Password*
[● ● ● ● ●]

[Login]

Customer Dashboard

Handy Illinois

[Plumber   🔍]

Found 20 results...

[Filter ▼]

Worker1   Worker2   Worker3   Worker4
Agency 1   Agency 2   Agency 3   Agency 4
★★★   ★★   ★★   ★

◁ ▷ 1. 2. 3. Next Page

Project work distribution

➢ Backend Development:
  ○ Database Design and Implementation: All Team Members
  ○ API Development: All team members
  ○ Authentication and Security: Prajwal
➢ Frontend Development:
  ○ User Interface Design: All team members
  ○ Development: All Team Members
➢ Data Processing and Analytics:
  ○ Data Cleaning and Integration: Akshat
  ○ Data Visualization: Trusha
➢ Integration and Deployment:
  ○ API - Frontend Integration: All Team Members
  ○ Deployment and DevOps: Prajwal, Venkatesh

Throughout the project, all team members will document their work, participate in regular code reviews, and contribute to the final project report, ensuring a cohesive and well-executed final product.