Recarnation : The Ultimate Platform for Buying and Selling Pre-Owned Cars

Team – **TechTitans**

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The Problem : Navigating the Used Car Market

- Navigating the Used Car Market

The increasing need for cost-effective and eco-friendly transportation has led to notable expansion in the used car market. Our project tackles this demand by creating a user-friendly, secure web application that streamlines this process.

- A Complex Seller Journey

Sellers, meanwhile, find the process equally daunting. Listing their cars, dealing with inquiries, negotiating prices, and handling logistics – the experience can be time-consuming and stressful.

Our Solution : ReCarNation Platform

1 Seamless User Experience

ReCarNation offers a simplified, intuitive interface, making it easy for buyers to find their dream car and for sellers to list their vehicles.

2 Comprehensive Features

Our platform features advanced search and filtering tools, detailed car listings and a comprehensive administration system.
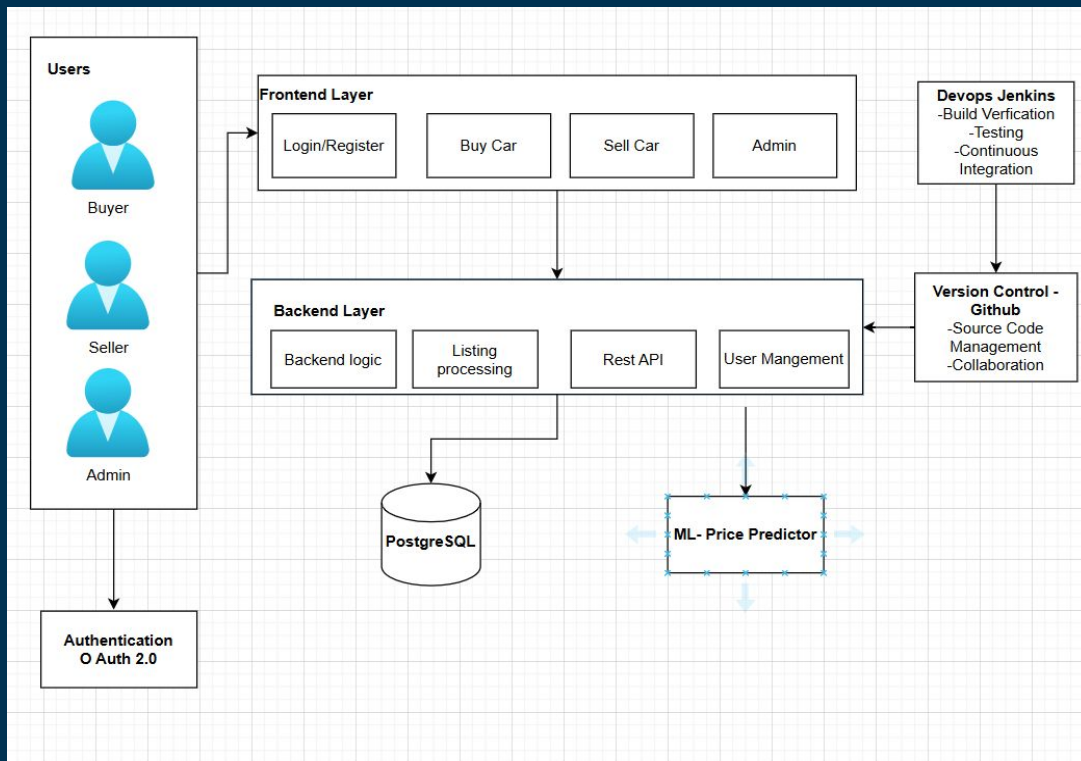
3 Trust and Transparency

We prioritize trust and transparency through strict verification processes, and secure communication channels.

At a Glance

Architecture Diagram

Key Features

❑ Sign In & Sign Up – Users can securely register and login using Oauth 2.0

❑ Buy Car – Advanced search and filtering for finding vehicles

❑ Sell Car – Intuitive forms for listing cars with detailed information.

❑ Admin – Robust control panel for managing users and listings.

❑ Price Predictor – Vehicle price prediction using linear regression

Technology Stack: Building a Robust Platform

Frontend: HTML, CSS, Javascript– Responsive, dynamic UI with advanced search and filtering.

Backend: Django – Handles business logic

ML Model: Linear Regression using libraries like Pandas, Numpy, Matplotlib

Database: PostgreSQL – Reliable and scalable relational database.

CI/CD: Jenkins – Automates building, testing, integration

Authentication: OAuth 2.0

Version Control: Github for code management and collaboration
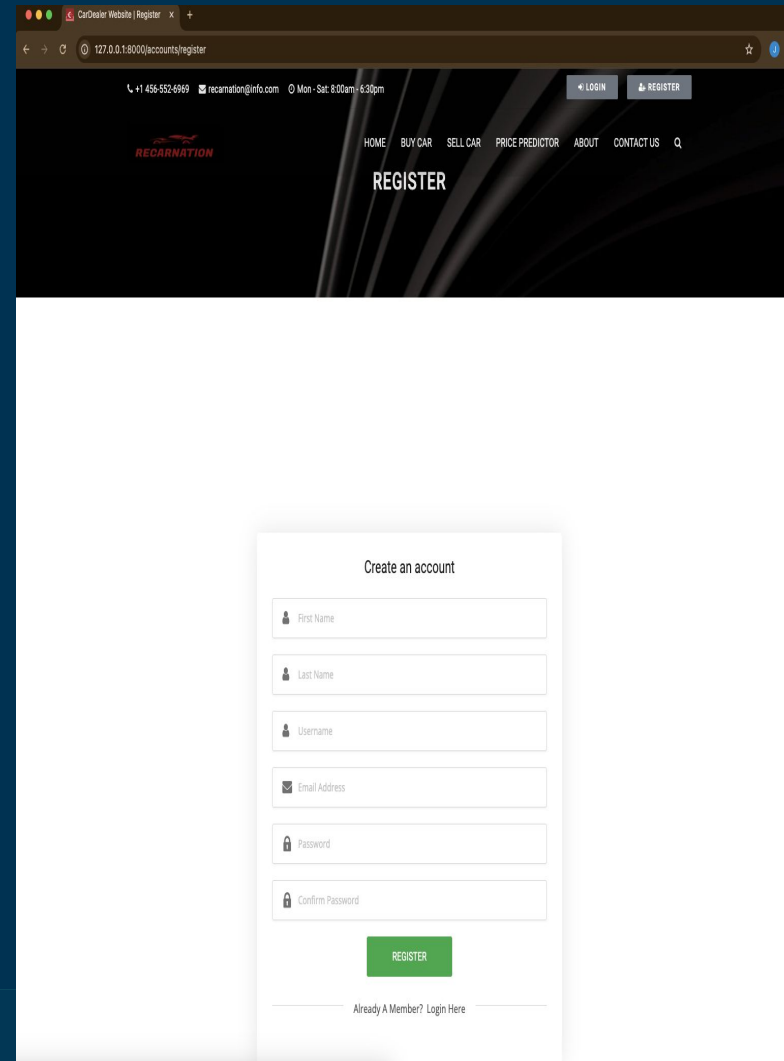
Sign up and Sign In

Users can register via a simple form.
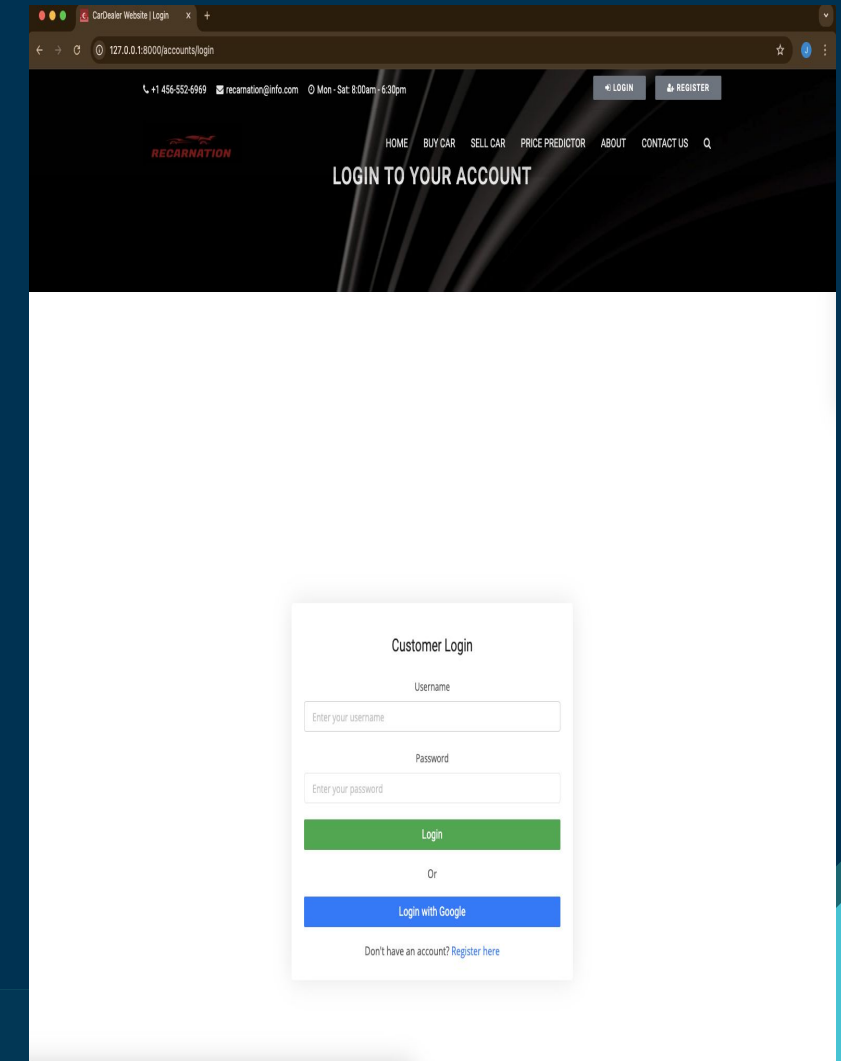
Secure login via username/email and password.

OAuth integration for Google.

Credentials are verified via Django Allauth backend.

Buyer Journey – A User-Friendly Experience

1 Landing Page

Our landing page features a sleek design and intuitive navigation, guiding users to the right tools and information.

2 Search and Filtering

The search bar and filters allow buyers to quickly narrow down their options based on make, model, year, price.

3 Listing Details

Each listing provides comprehensive details about the vehicle, including photos, vehicle history reports.

4 Secure Communication

Buyers can communicate with sellers through email by sending a message .
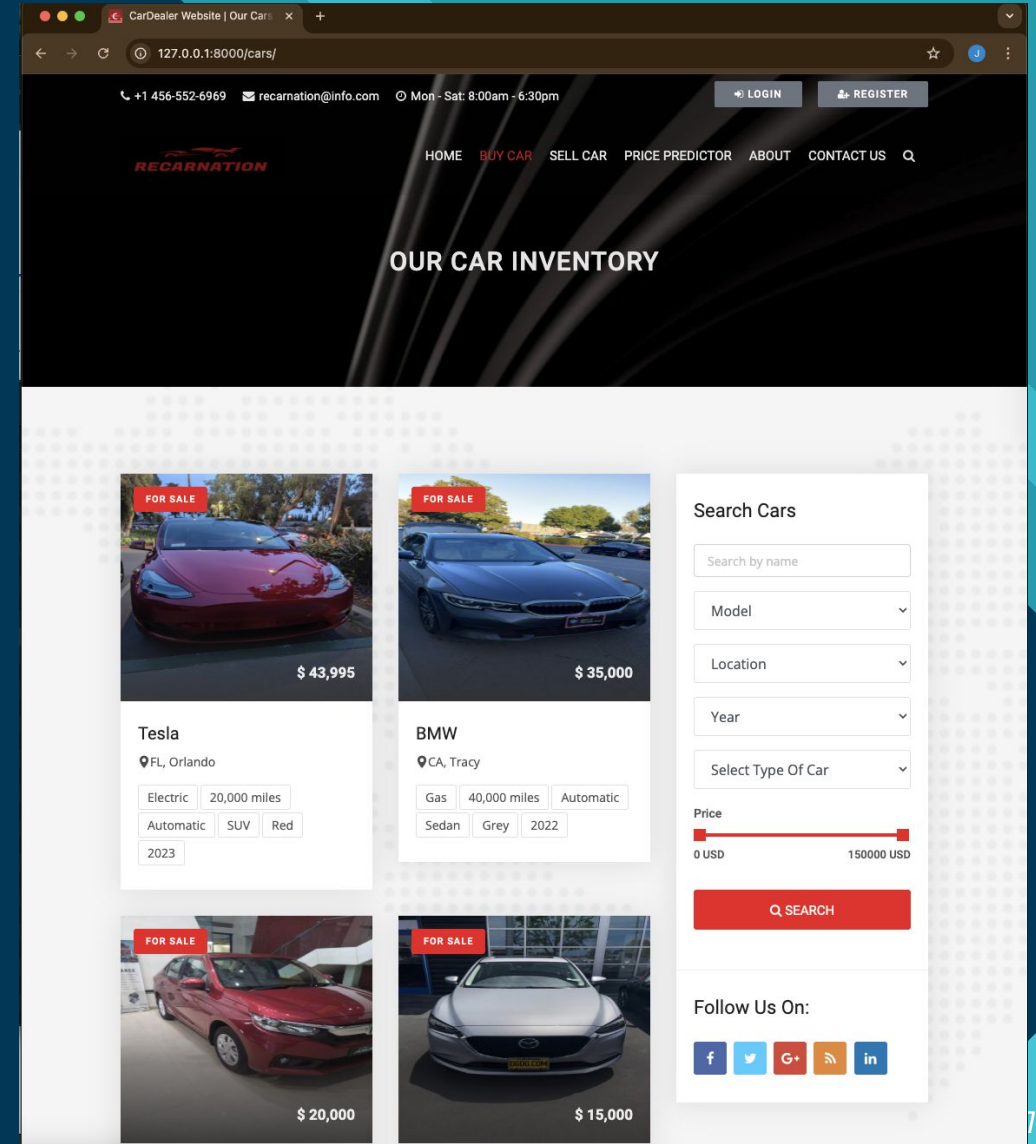
Seller Journey: Listing Your Vehicle

1 Simple Listing Creation

Listing a car on ReCarNation is easy and intuitive. The platform provides a clear and concise form with detailed fields for car information.

2 Comprehensive Information

Sellers can input all relevant details about their car, including vehicle history, maintenance records, and any potential issues.

3 Image Uploads

Users can upload high-quality photos of their car, showcasing its condition, features, ensuring potential buyers have a clear picture.

4 Listing Management

ReCarNation empowers sellers to manage their listings, adjust prices, respond to inquiries.

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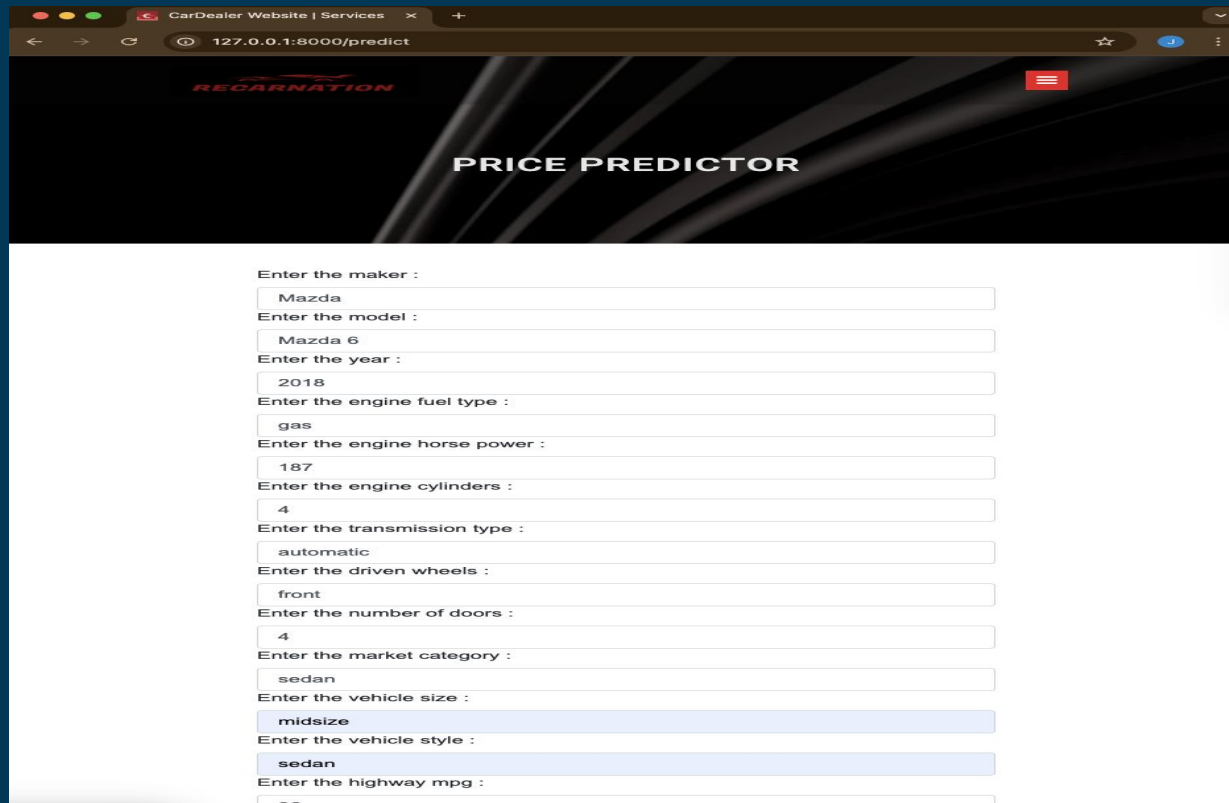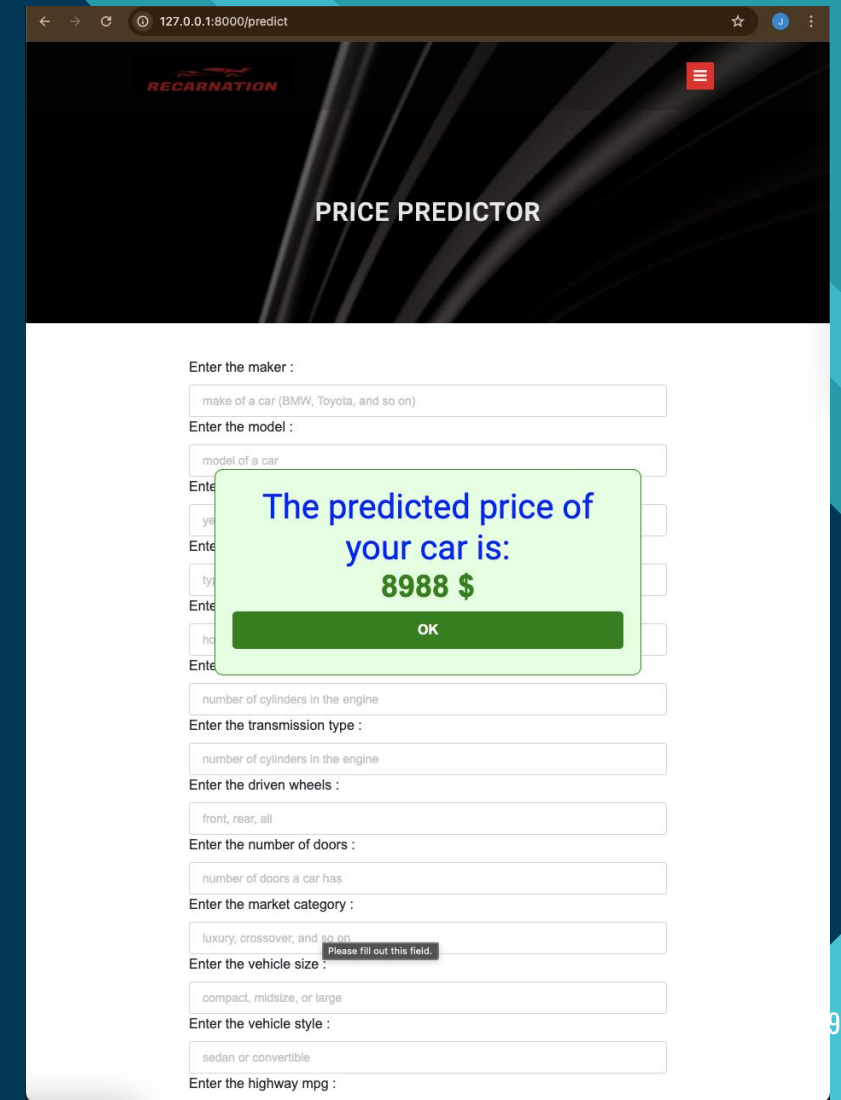
Vehicle Price Prediction Using Linear Regression

- Data preprocessing and splitting into training, validation, and test sets.

- Building and optimizing a regression model with regularization.

- Using the model for accurate vehicle price predictions.

ReCarNation: Admin Management System

Listing Approval Workflow

Administrators can review, approve, or reject listings before publication, ensuring a high-quality and trustworthy marketplace.
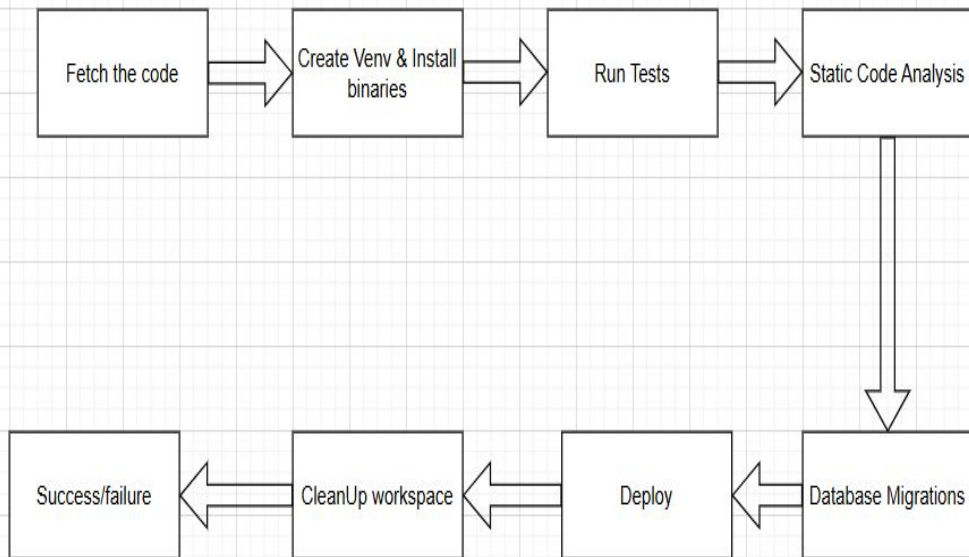
Handle permissions

Administrators have control over user permissions to maintain platform integrity and security.

Manage vehicles

They can also manage sold and unsold vehicles, including updating or removing listing details as needed..
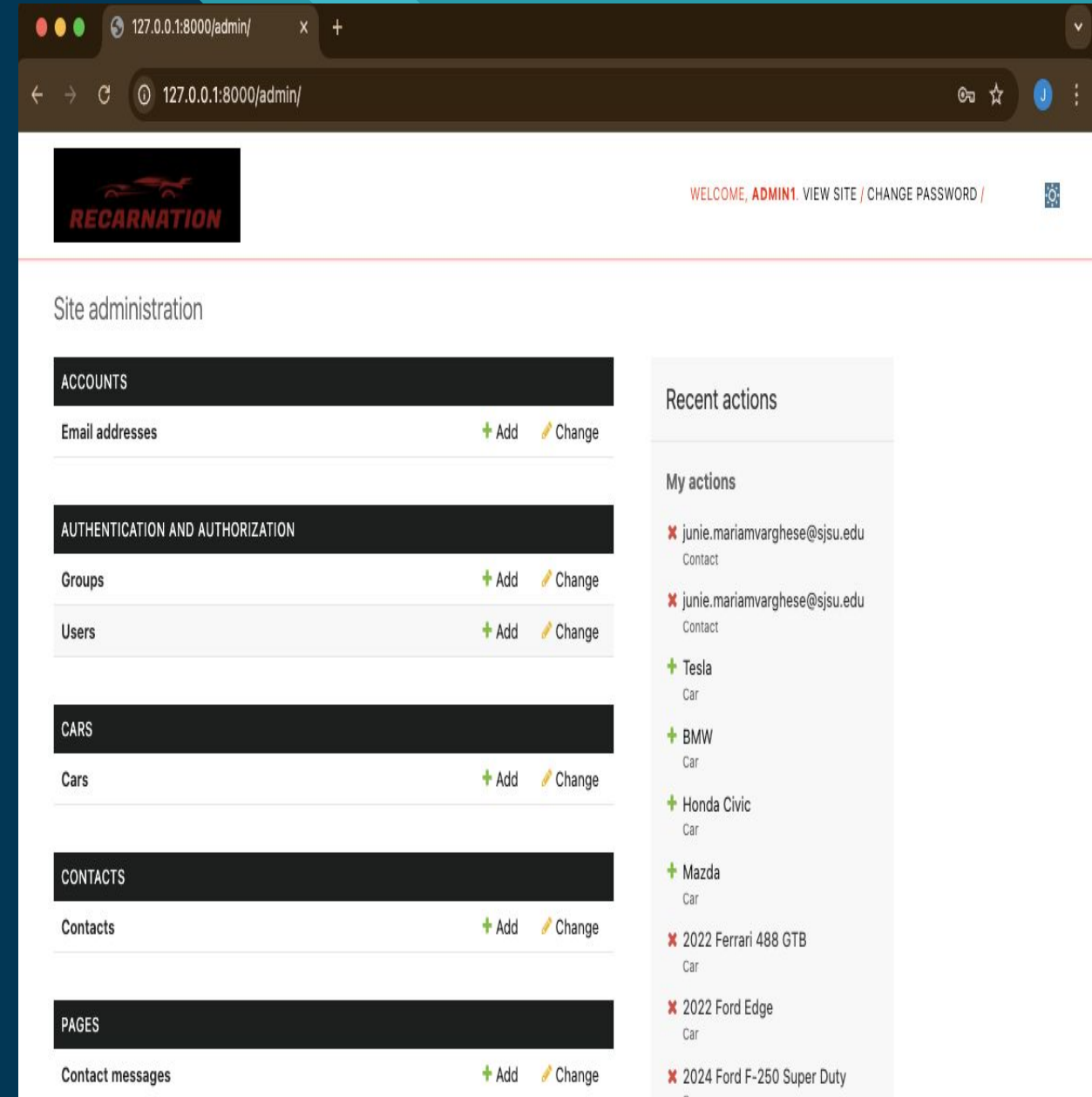
Jenkins CI/CD Integration

Thank You