



AI-POWERED TARGETED CAR DETECTION



Lujain Aljahdali Awatif Mohamed Raghad Hawsawi
Supervisor: Dr. Reemah Alhebshi

INTRODUCTION

Car theft and vehicle loss are persistent global challenges, leading to significant financial losses for individuals, insurance companies, and law enforcement. Current tracking methods, like basic GPS systems, are often unreliable and easily bypassed by thieves. This creates a clear need for innovative technologies that can effectively detect, track, and recover lost or stolen vehicles.

OBJECTIVES

- Facilitate vehicle monitoring through detailed input (e.g., license plates, models).
- Ensure accurate real-time detection using advanced AI technologies.
- Provide instant alerts for faster law enforcement response.
- Keep timestamped logs with photographic evidence for investigations.

DATASETS



593 annotated Saudi Plates for the characters recognition

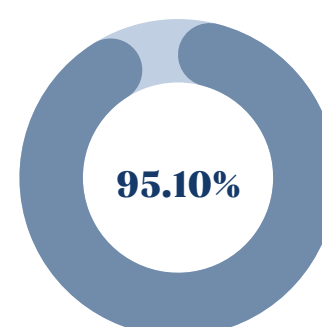


2,079 images of Saudi license plates from the "saudi-plates-dt" dataset



7,267 images from the VCoR dataset

AI RESULTS



Car Plate Detection

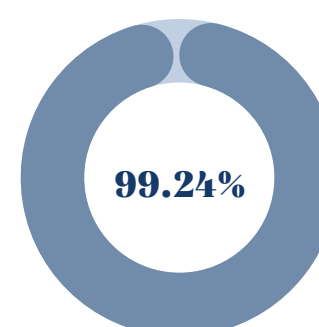
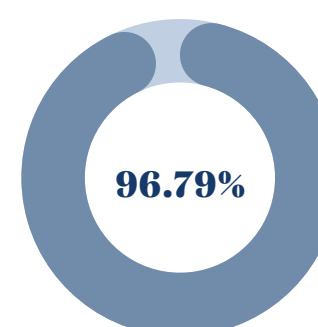
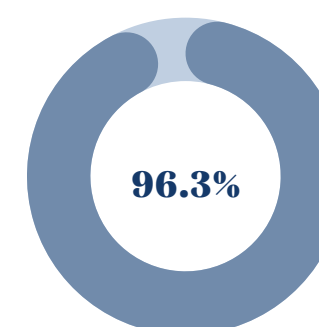


Plate Character Detection

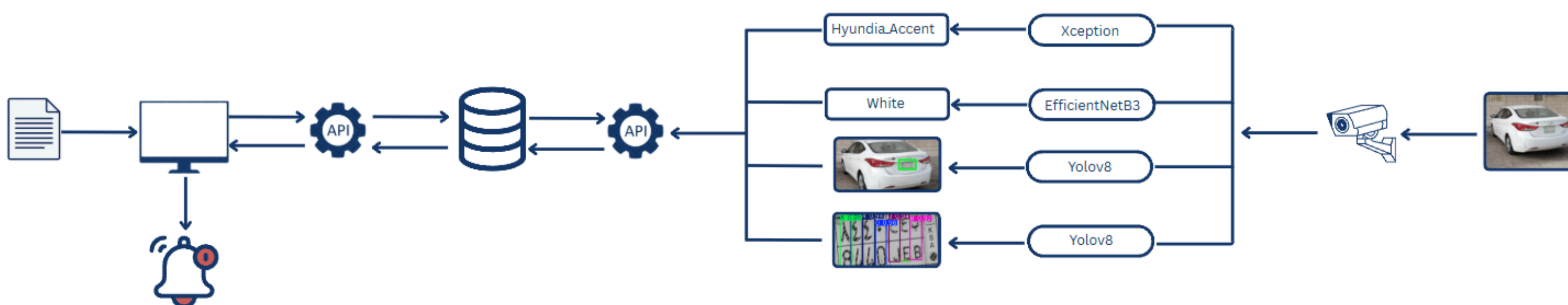


Car Models Recognition

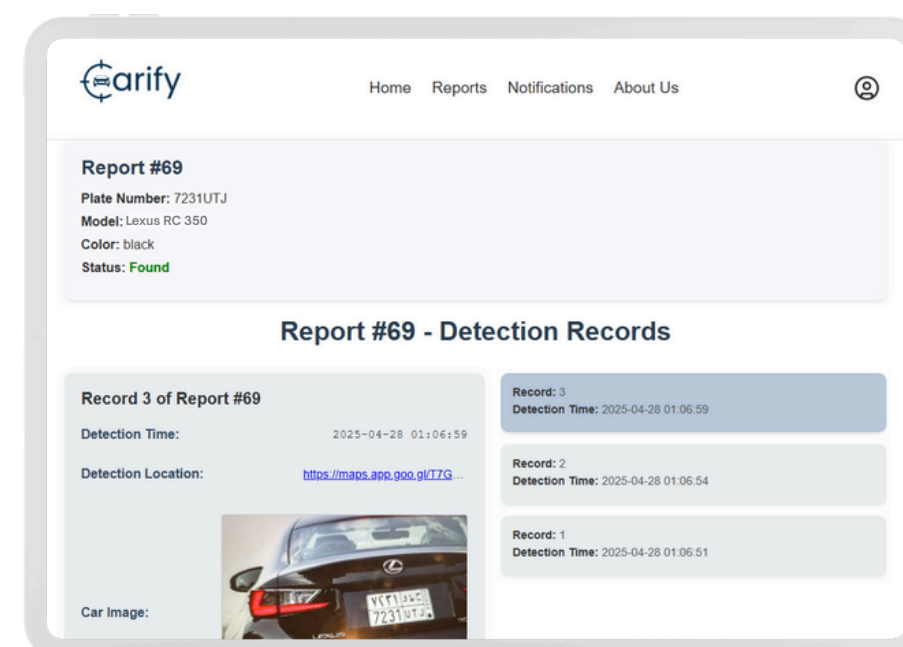
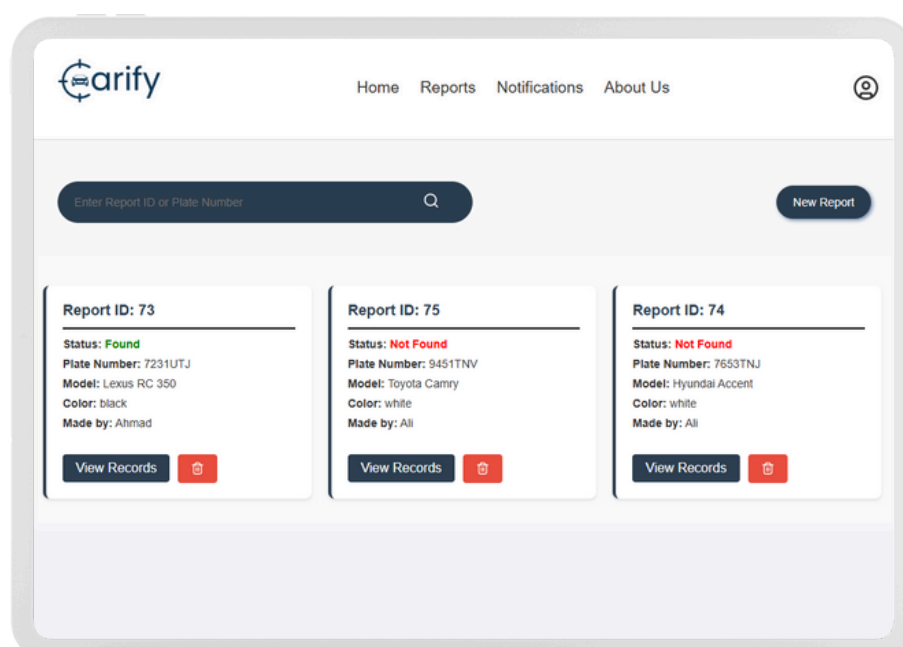
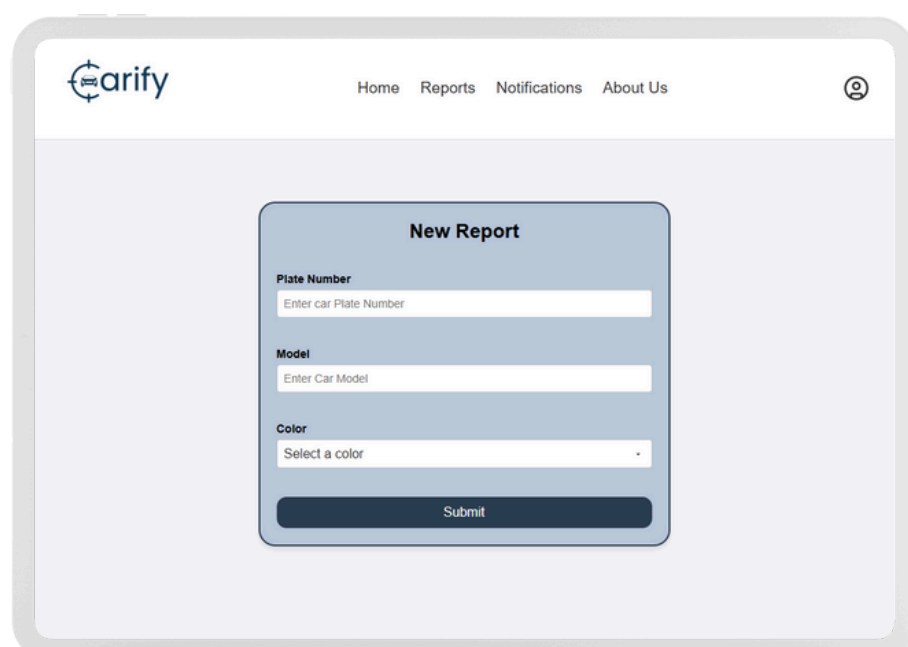


Car Colors Recognition

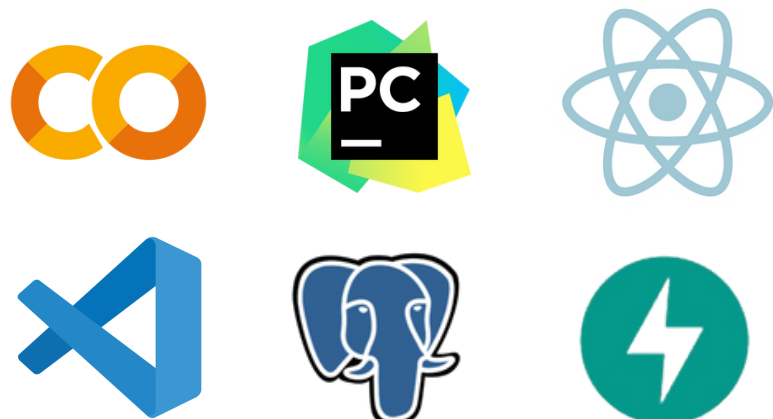
SYSTEM PIPELINE



SYSTEM INTERFACE



TOOLS



FUTURE WORK

- Enhance the system to detect vehicles under various weather conditions and different lighting conditions.
- Optimize the "Car Models Recognition" model by adding more car models.

QR

