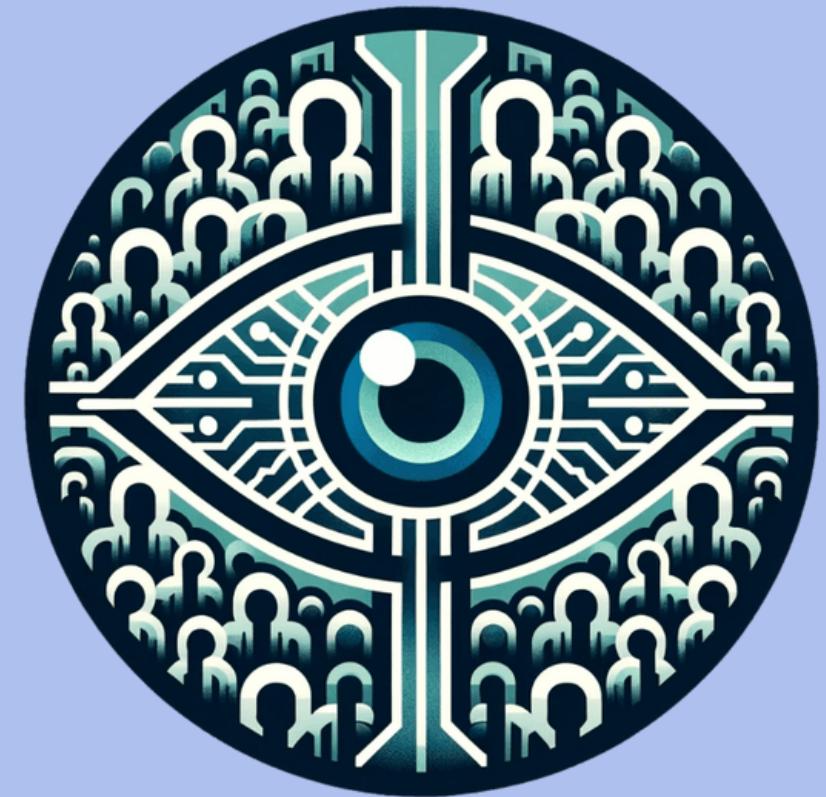


INSIGHTIO

CENG 407 Presentation



TEAM MEMBERS



Eda Nur Altunok



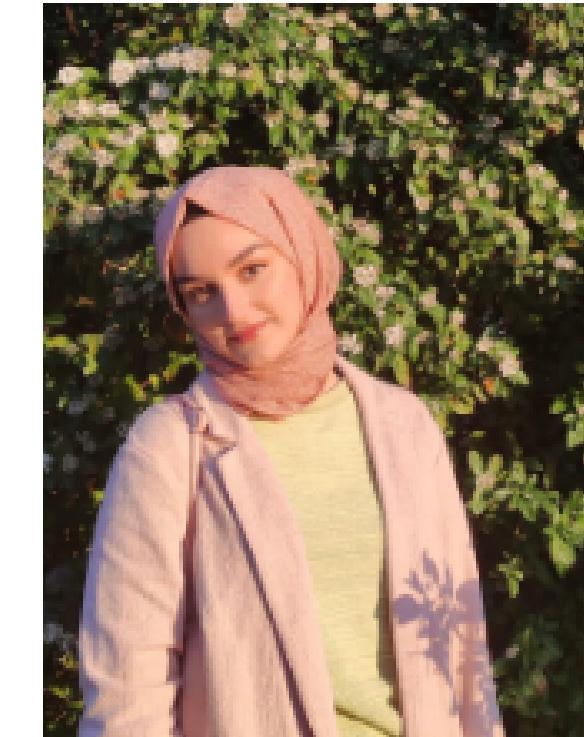
Ekin Nalçacı



Gündalp Güngör



Utku Özbek



Zeynep Polat

ADVISOR

SERDAR ARSLAN

PROJECT PURPOSE

MISSION

VISION

REQIREMENTS

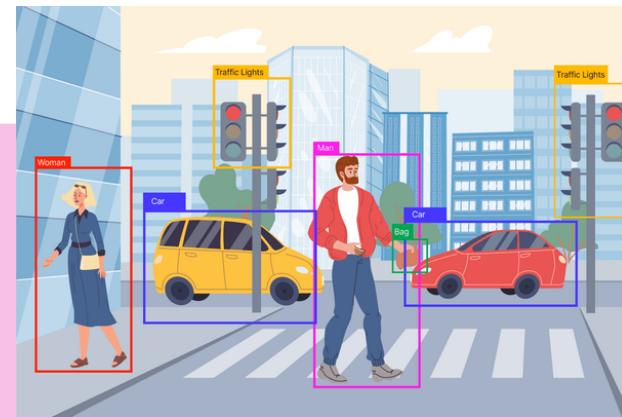
PROBLEM



PROBLEM



- Target Audience:
Business Owners and
Managers



- Crowd Counting
- Object Tracking



- Strategic Decisions

MISSION

Aspire to guide daily operations
more efficiently

Adopt a more conscious approach to
strategic decision-making

Contribute to the operational
processes of businesses

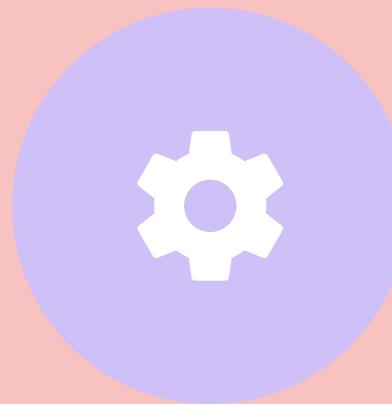
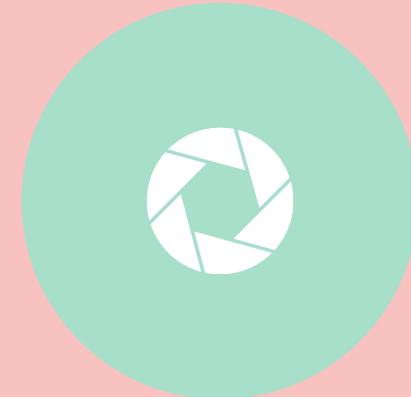
VISION

Enhance business adaptability

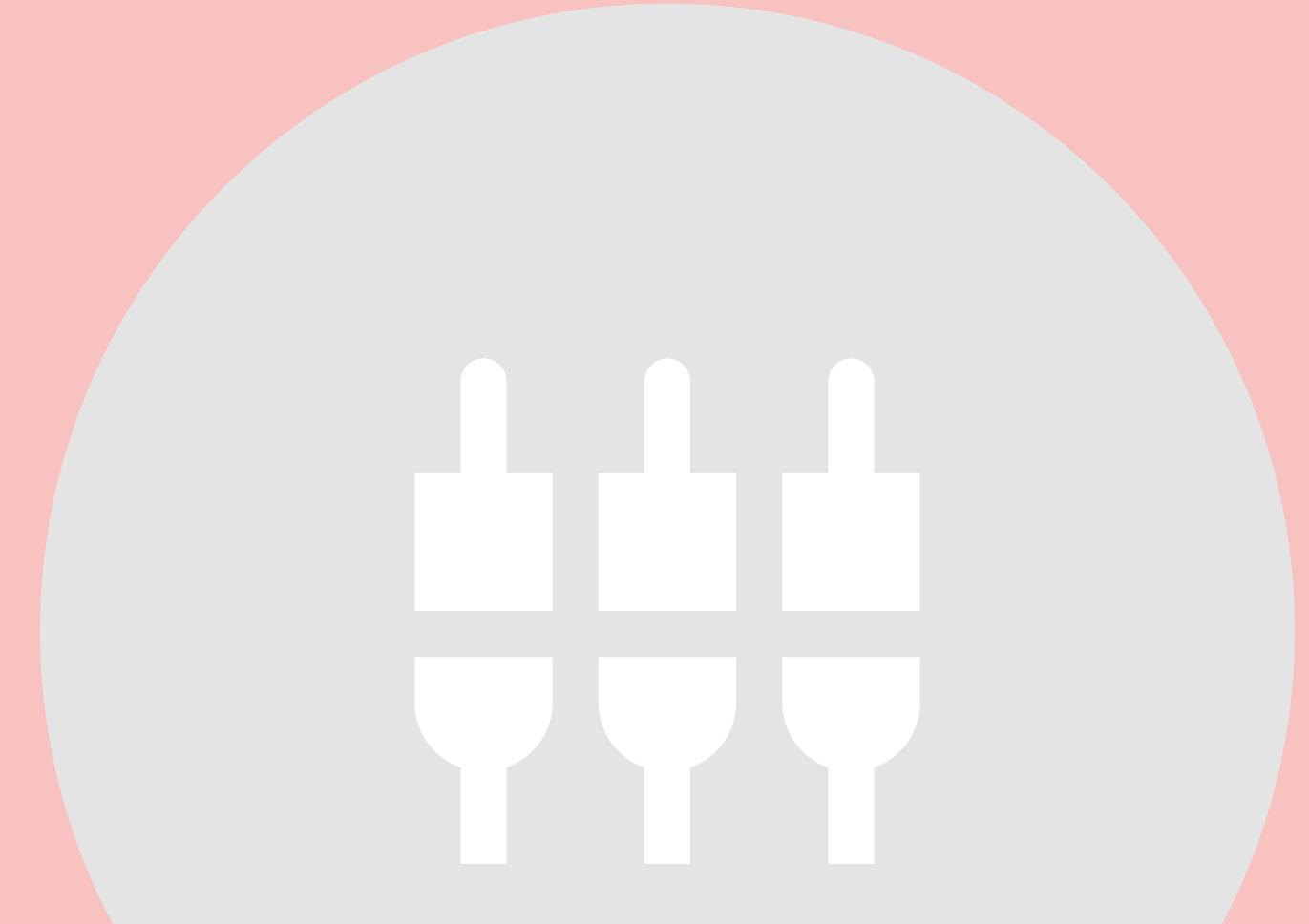
Enable data culture

REQUIREMENTS

**Camera
Configuration**



**Dashboard
Integration**

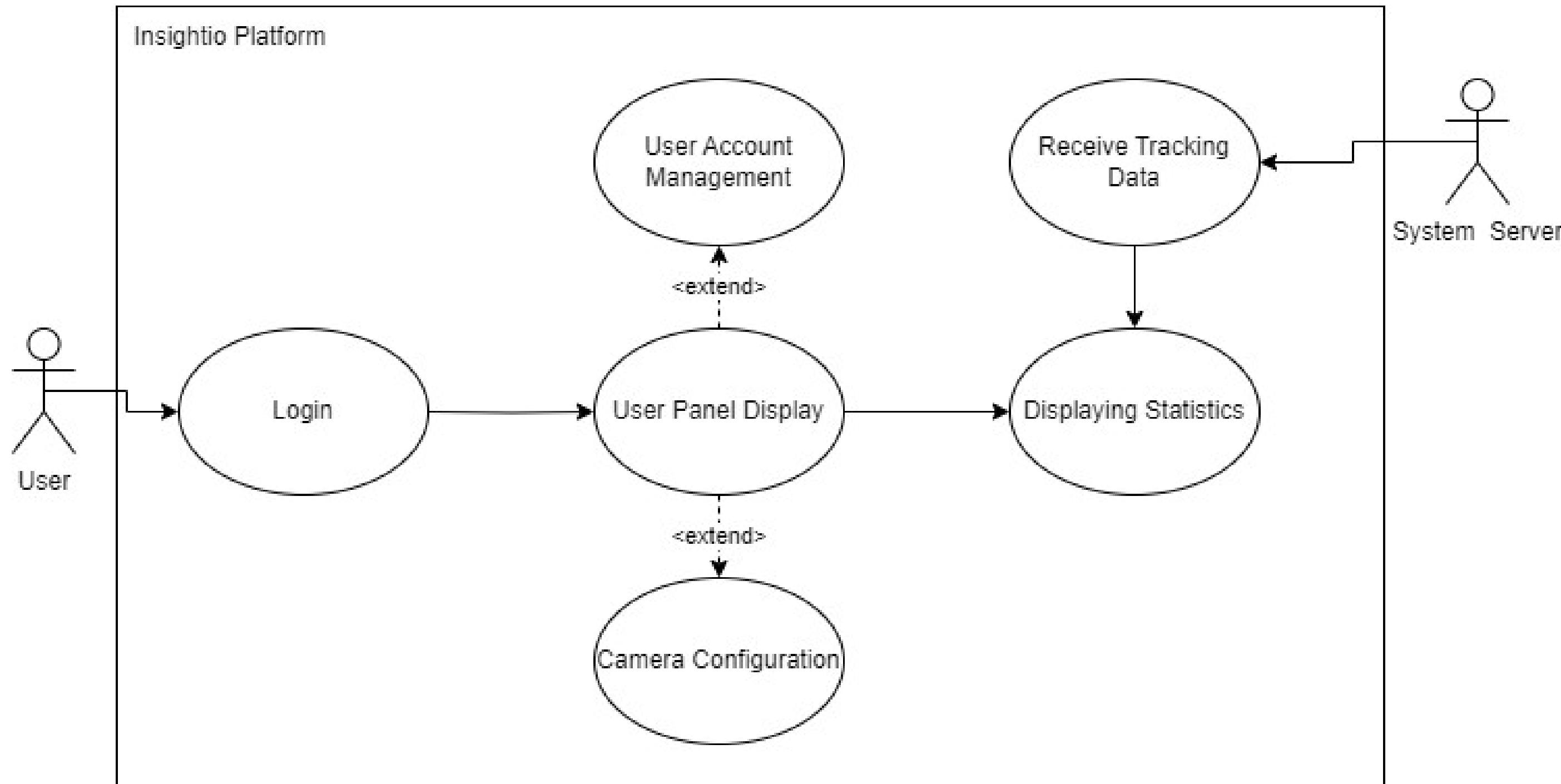


**User Account
Creation**

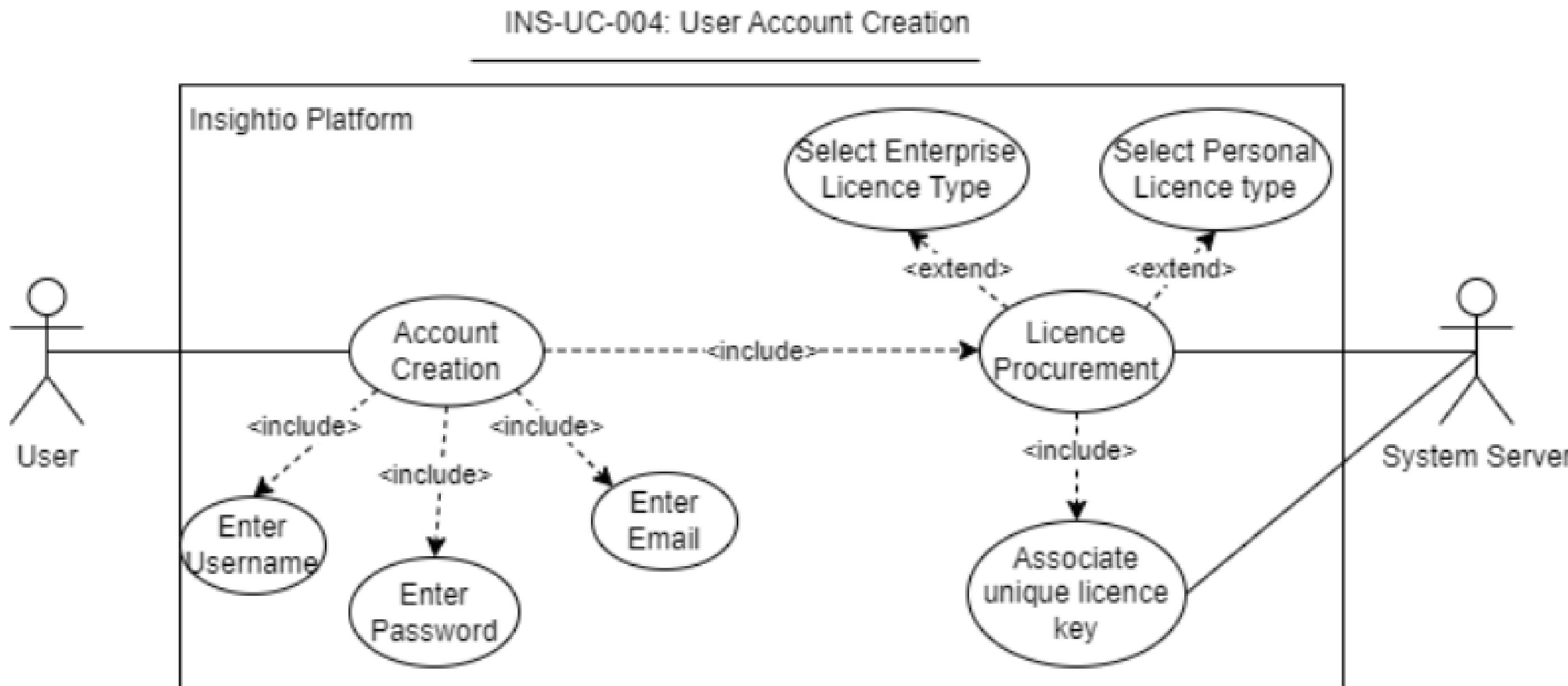
USE CASES



UC-001-DASHBOARD INTEGRATION

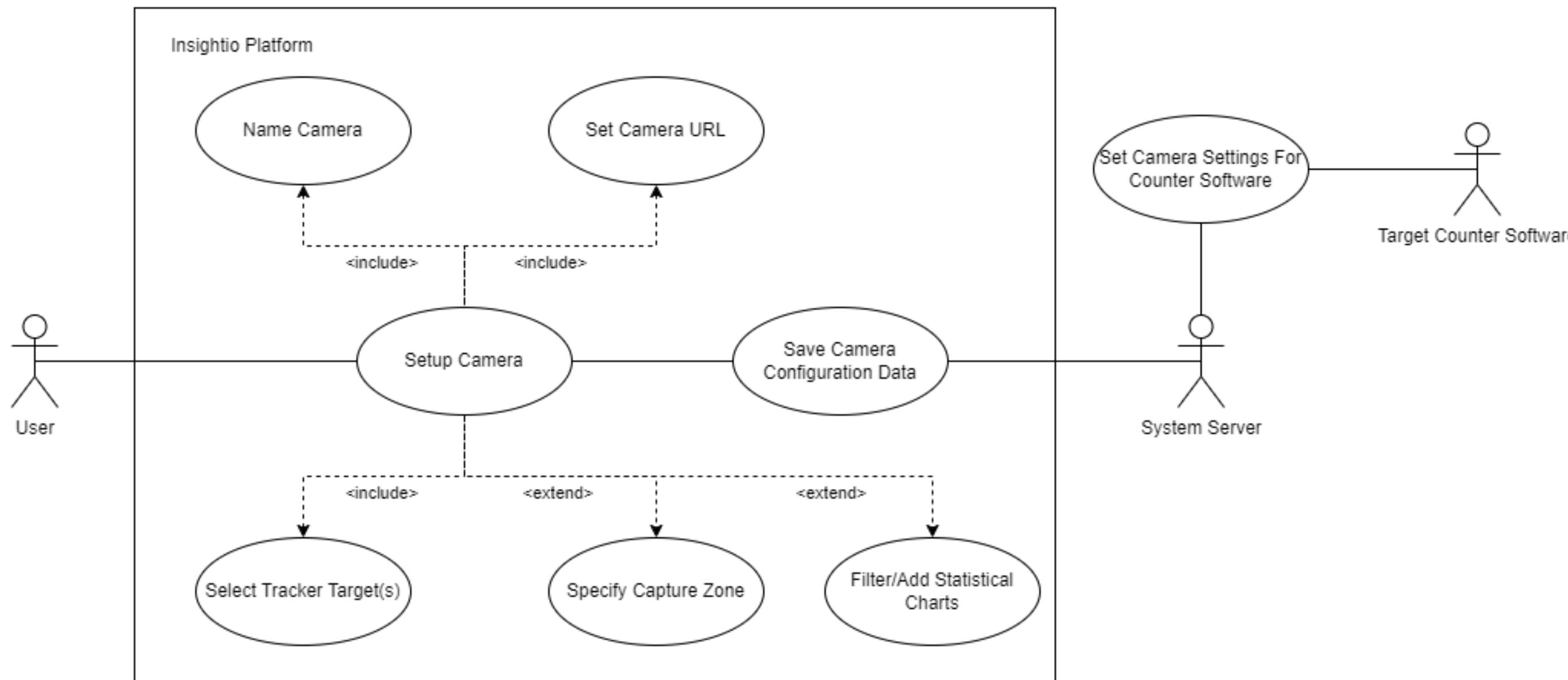


UC-004 USER ACCOUNT CREATION



UC-005: CAMERA CONFIGURATION

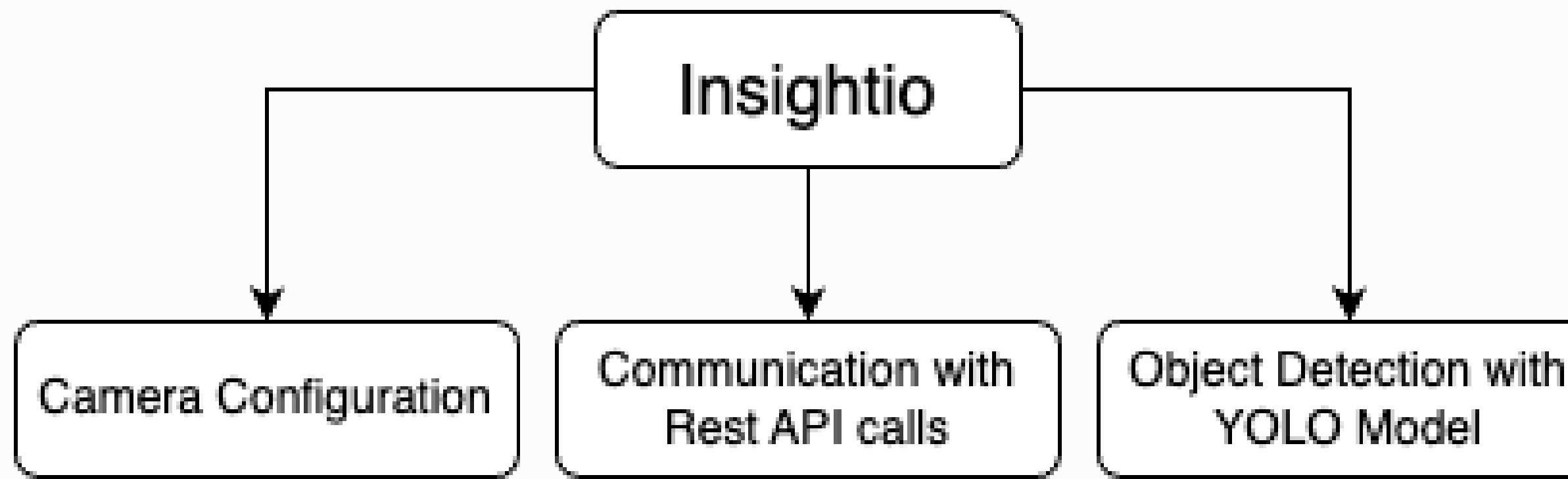
INS-UC-005: Camera Configuration



DESIGN



SYSTEM DESIGN



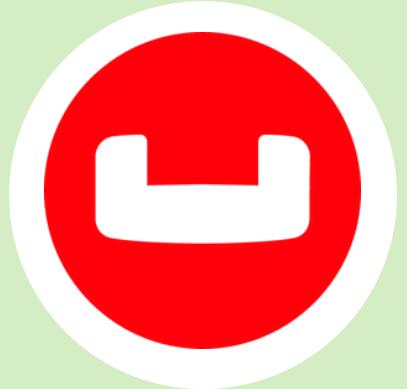
Component Design

SYSTEM ARCHITECTURE



Backend Architecture

- MVC pattern
- Domain Driven Design



Database Architecture

- NoSQL Database
- Scalability
- Eventual consistency

SYSTEM ARCHITECTURE



Frontend Architecture

- Responsive Design
- Reactivity



Overall Architecture

- Rest Communication
- Layered Architecture

USED TECHNOLOGIES

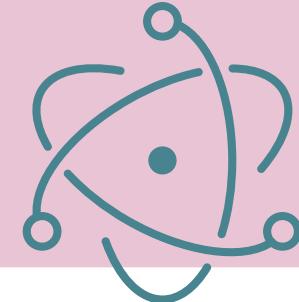


Frontend Technologies



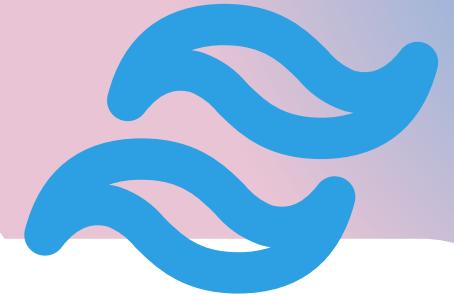
SvelteJS

- JavaScript framework for the renderer part of Electron application
- Improves responsiveness and efficiency



ElectronJS

- Modern computer program that works well with the operating system using JavaScript



Tailwind CSS

- CSS framework to create an easy-to-use and responsive user interface

Backend Technologies



Spring Boot

- Framework for REST API calls
- Robust and scalable server-side solution



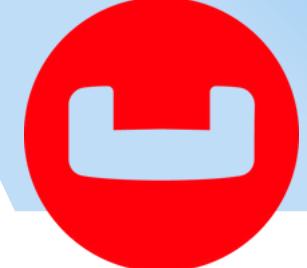
Maven

- Build tool
- Smooth and consistent builds of application



Kotlin

- Programming language that runs on the JVM
- Clear syntax
- Java functionality



Couchbase

- NOSQL database to manage huge amount of data

Image Processing Script



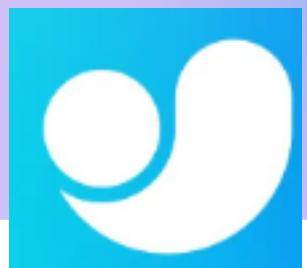
Supervision

- Lightweight and modern computer vision library



OpenCV

- Integrated with Supervision to act as the base library
- Handle frame-based operations



Ultralytics

- YOLOv8 classification model
- Accurate and fast object detection

INTERFACE DESIGN

Login

Username:

Password:

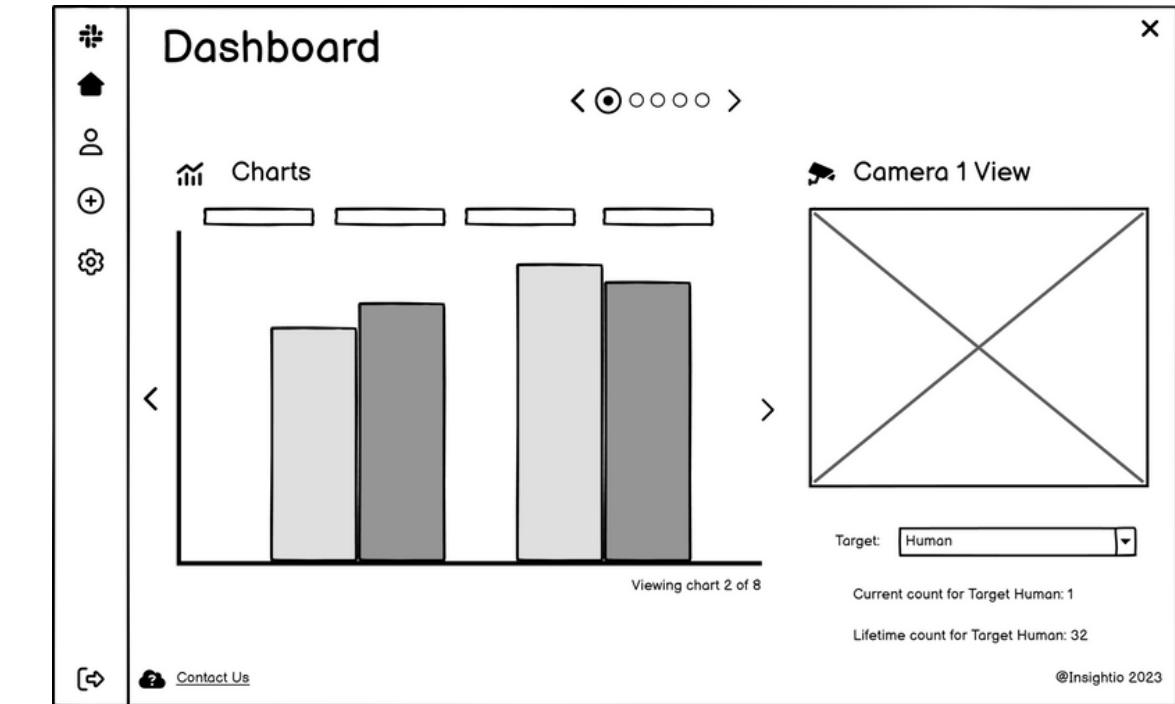
[Contact Us](#)

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Dashboard

Configure a camera to get started

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Account

Account Picture

Info

Name:

Surname:

E-mail:

Password:

[Contact Us](#)

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Camera Configuration

Edit mode: Off

Camera View

Draw zone

Settings

Name:

Camera Type:

Built-in

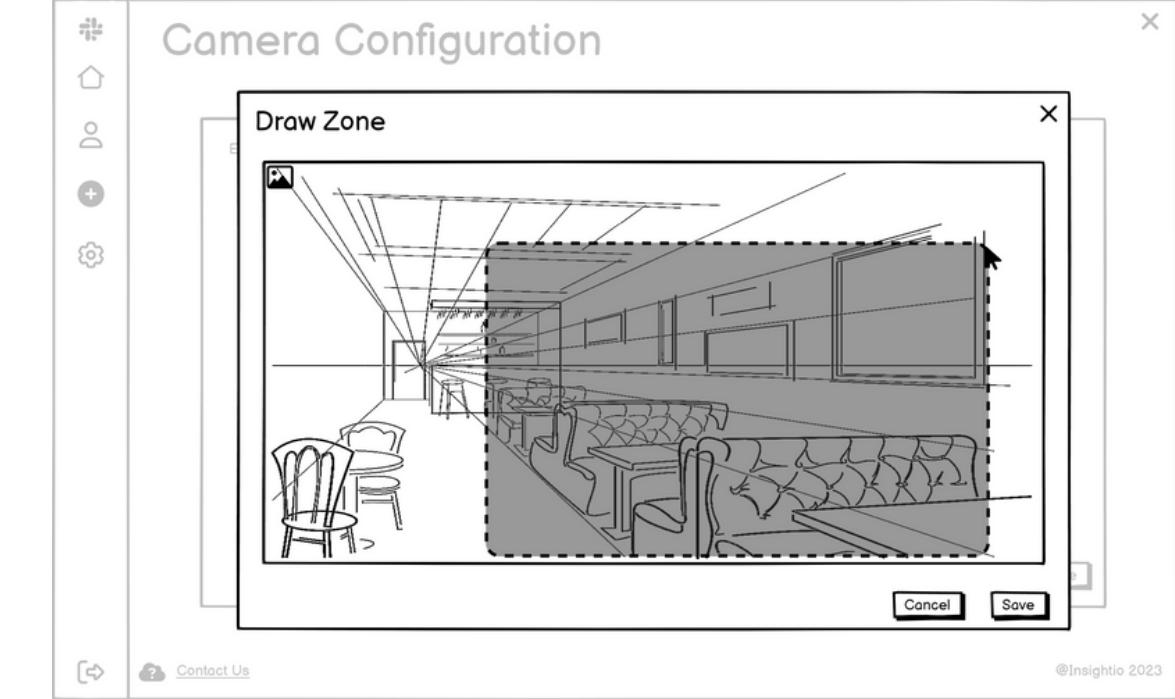
IP Camera

Select camera: Webcam

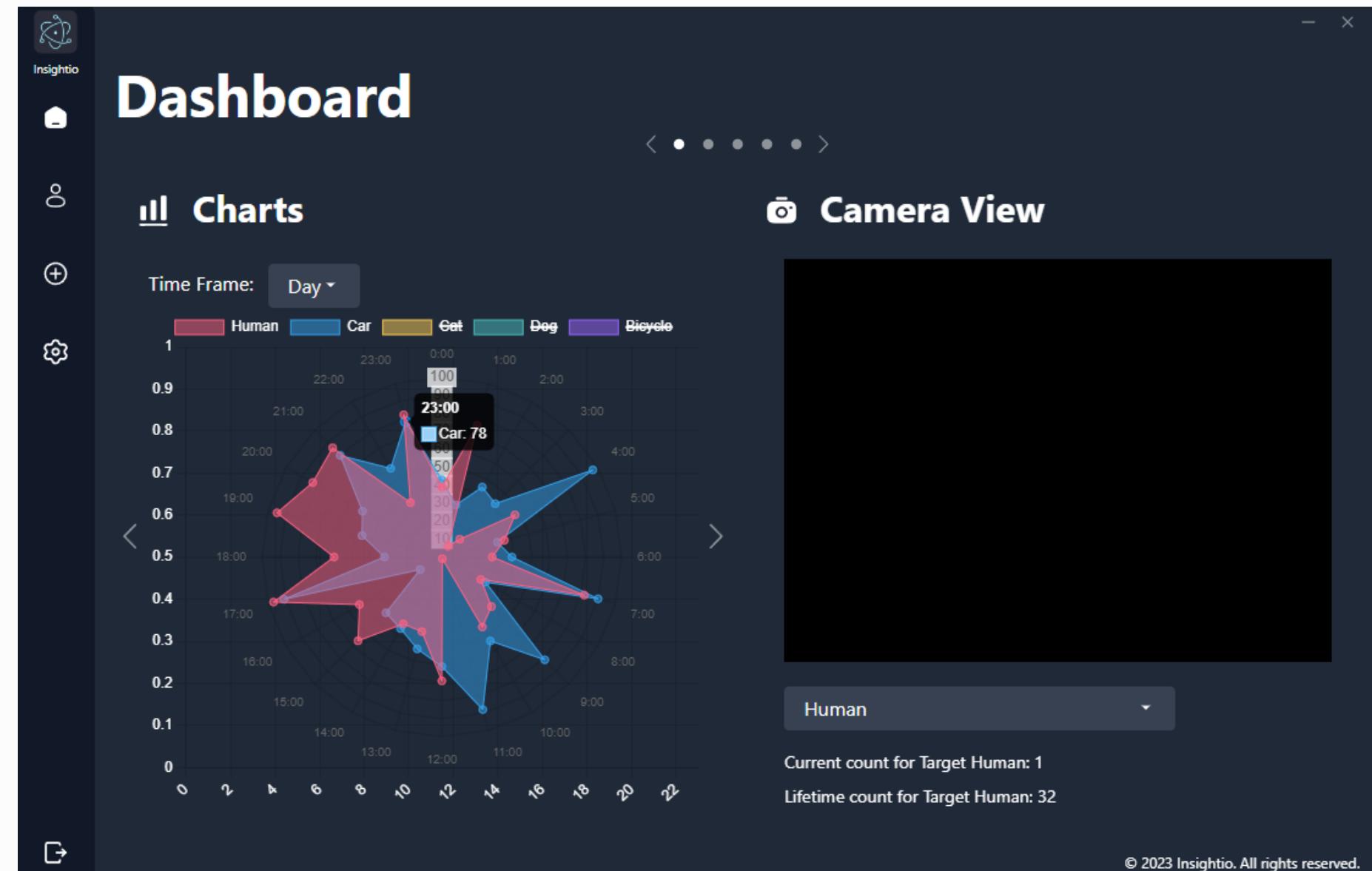
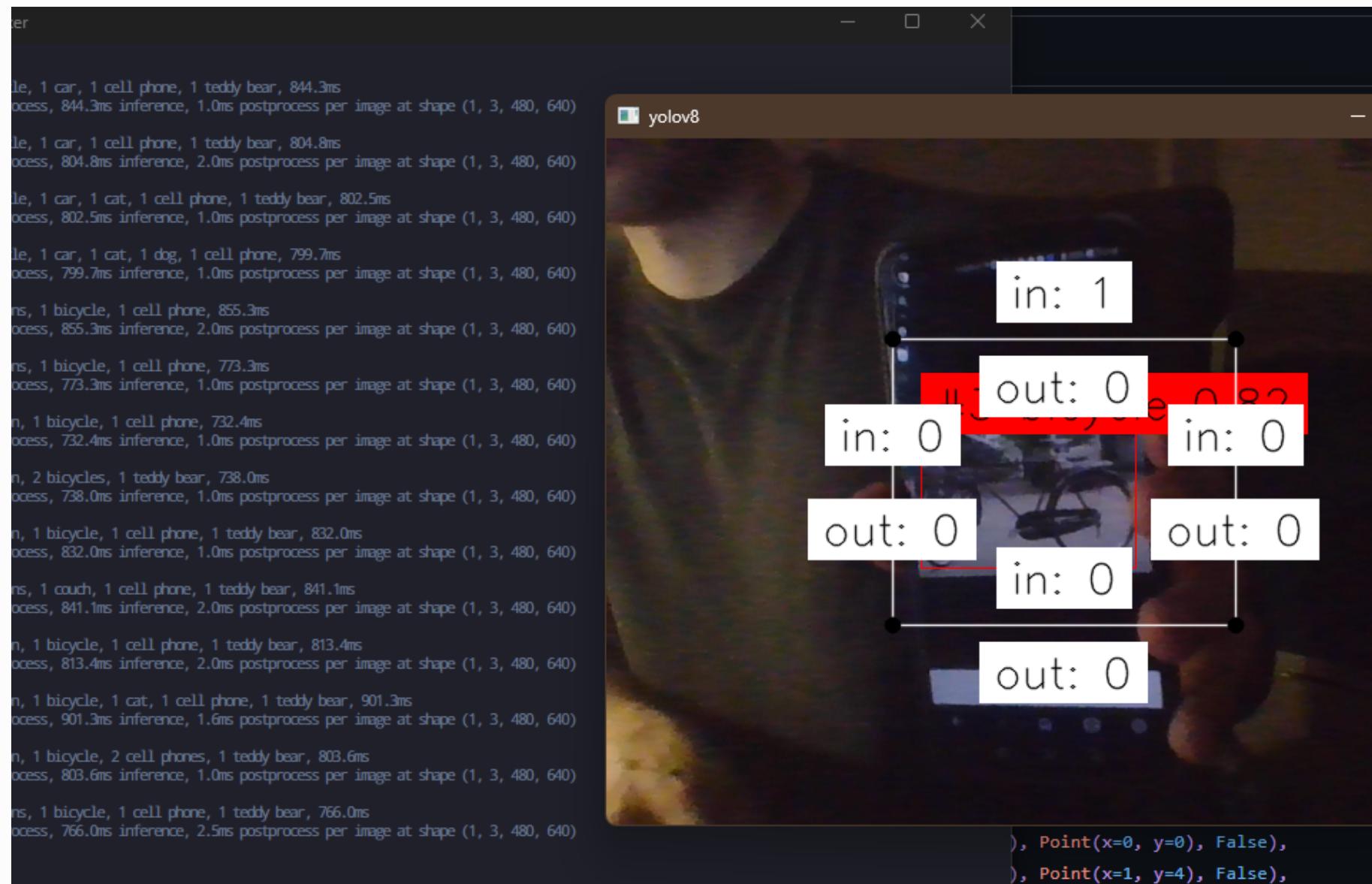
Targets: Human, Car

[Contact Us](#)

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DEMO



Thank You

DO YOU
HAVE ANY
QUESTIONS?

Relevant Links:

- [Webpage](#)
- [Repository](#)
- [Wiki](#)
- [Work Plan](#)