



**TED UNIVERSITY**

**CMPE 491 Senior Project**

**OWL Border Security Project Proposal**

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Project Name	OWL Border Security
Project's URL	<a href="http://owlbordersec.com">owlbordersec.com</a>

## Project Idea Description

The Project, OWL, aims to develop an AI-based border security system that analyzes not only object presence but also behavioral patterns and intent behind border activities. The system integrates video and sensor data to detect, track, and interpret suspicious movements in real time.

## Core Focus Areas

**Human Smuggling Patterns:** Detect coordinated movements, repeated attempts, and pre-crossing behaviors

**Goods Smuggling:** Identify abnormal transport and material-based activities

**Smuggler Profiling:** Analyze behavioral roles and experience levels within groups

**Reconnaissance & Intent Analysis:** Detect border testing behaviors and classify events (recon, preparation, crossing)

**Smuggling Methods:** Identify tactics such as small-group infiltration, night movement, and diversion strategies

## Objectives

- 1) Detect and track humans, vehicles, and objects
- 2) Reduce false alarms using multi-sensor validation
- 3) Analyze behavior instead of isolated detections
- 4) Provide interpretable alerts with risk and intent classification