

**United International University**

**Department of CSE**

**Course Code:**

**Course Name:**

**Experiment no.**

**Experiment Name:**

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| **Submitted by:** |
| **Name:** |
| **Student ID:** |
| **Section:** |
| **Date of Performance:** |
| **Date of Submission:** |
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**Objective:** *To Construct a Bangla Car License Plate Recognition System to improve Traffic efficiency and Safety.*

**Apparatus/Instruments used:**

*We used Hardware and also Software Components to Construct the System.*

**Hardware:**

1. ***Raspberry PIE***
2. ***High Spec Camera Module***
3. ***Servo Motor***
4. ***Barricade controlled by the Servo***

**Software:**

1. ***Python Language***
2. ***EasyOCR***
3. ***YOLOv8***
4. ***Car Detection model***
5. ***Plate Detection Model***
6. ***Mongo DB for Database***
7. ***FastAPI for Communication***

**Features:**

1. ***Plate Detection***
2. **Number Plate Extraction**
3. **Search For LAW Breach in Database**
4. **Store Related Data in Database**
5. **Speed Detection**

**Methodology/Solution:**

* **Model Train:**
* ***Car Model: The first model we trained was for car , trucks, buses and other objects that are typically found on the road. For this we used YOLOv8 pre trained model and tweaked its bounding boxes for the convenience and the usual diameter of Bangladeshi cars for Better Accuracy.***

***With an Average of 80-95% we can safely say the model is accurate.***

* ***Plate Mo:***

**Discussion:**