# Mepco Schlenk Engineering College , Sivakasi
## Autonomous
## Department of Artificial Intelligence and Data Science

### Fortnight's Report

Date of Submission: 01/02/2025

Fortnight Period: 18/01/2025 – 31/01/2025

Project Title: **Integrating Deep Learning for Safety Management in Construction: Semantic Image-Rule Matching for Unsafe Behavior Detection Using YOLO-ESCA.**

Project Guide: **Dr.P.Swathika, ME, PhD, Assistant Professor AI&DS Department.**

Name of the Students with Register Numbers:

### Abishek S (9517202109005)

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**Activities Done:**
- The model training process incorporated EIoU Loss.

- The performance of YOLO ASCA and YOLO ASCA with the inclusion of EIoU Loss was compared.
- The accuracy improved from 92% Mean Average Precision (mAP) in

    YOLO ASCA to 94% mAP in YOLO ASCA with EIoU Loss.

**Constraints faced:**

- The inclusion of EIoU Loss increased computational complexity and required careful hyperparameter tuning for optimal performance.

**Intermediate deliverables:**

- The model was trained incorporating EIoU Loss.

- A performance comparison was conducted between YOLO ASCA and YOLO ASCA with EIoU Loss.

**Signature of the Guide with Date:**


**Signature of the Project Coordinator with Date:**