**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:**