

Internship Project Overview

Project Introduction:

This internship project focuses on building a real-time system that detects poor sitting posture using pose estimation and machine learning techniques. Students will use camera input to track key body points such as shoulders, neck, and hips, and train a simple ML model to classify postures as "good" or "bad." The project mimics real-world applications in workplace ergonomics, healthcare, and wellness tech.

Project Scope

Initial Scope:

- Set up development environment and software (APT) tool
- Capture and label sample data (good, bad posture examples)
- Train and test a lightweight ML model for posture classification using APT tool
- Implement logic to extract keypoints (shoulders, neck, hips) from pose data
- Test posture detection across different users and environments
- Prepare and submit a short report at the end

Extended Scope (Optional):

- Build a basic camera-based posture monitoring system
- Build a simple user interface to display posture status and scores
- Add real-time alerting system (beep, popup) for poor posture
- Log posture history and generate summaries or analytics
- Final extended report and presentation

Learning Outcomes

By completing this project, students will:

- Gain hands-on experience with pose estimation tool
- Learn how to label data and train ML models
- Understand human posture analysis and real-world computer vision applications
- Develop a practical end-to-end AI solution from concept to deployment



- Enhance skills in computer vision, Python, UI development,

Timeline

- **Duration:** 1 Month - July 2025 (can be extended by 1–2 weeks upon request)
- **Weekly Check-ins:** Students are expected to provide weekly progress updates
- **Final Deliverables:**
 - Working prototype
 - Presentation/demo video

Expectations

- Active participation, self-learning, and timely progress updates
- Final output must be demonstrable and functionally working
- Collaboration in a team