

# **Development of a Pan-Tilt Gimbal Control System for Mechanical Video Stabilization and Vision Based Target Tracking.**

## **Zeroth Review -Minutes of Meeting**

Date: 12/11/2025

### **Team**

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### **Panel Members**

Dr. Sivanathan K, Dr Anitha Kumari S, Dr Santhosh Rani M, Dr Thiagarajan J,  
Dr Priya Ester B,

### **Agenda**

- 1) Review of Project title
- 2) Discussion on problem statement and scope
- 3) Review of proposed methodology
- 4) Project approval

### **Discussion Summary**

- 1) The team presented the project objectives, explained the context of the problem along with providing a tentative timeline and expected Deliverables.
- 2) Briefly discussed the control architecture of the algorithm, mentioning 2 controllers that operate 2 different levels of control namely inner loop for tracking and an outer loop for stabilisation.
- 3) Explained the hardware level overview of components and their interaction.
- 4) The panel expressed their concern for lack of fabrication of components.

- 5) The team emphasized that the project premise lies in the control domain with integration , and the existing hardware does not comprise anything but onboard IMU and Encoders.
- 6) The team also made it clear that since this hardware is donated from IRDE, everything about the hardware is behind closed doors and the team has to work finding information from scratch.
- 7) The panel raised questions about the FPGA programming and the nature of control algorithm that the team is planning to implement and actuator parameters
- 8) The panel expected more details regarding hardware parameters.

## Decisions Made

- 1) Project title and objectives approved.
- 2) Expecting a justification on the complexity of the project and clarity on the hardware subsystem in subsequent reviews.