Problem Statement (Media Track)

Task

Create a fully edited video for the **IROC-U 2025 Qualification Round**, using the raw footage, logos, name lists, and reference material from the **IROC-U 2024** video. The final output must include music, graphics, and clean storytelling that highlights the required tasks and system features. The following is a summary of what must be shown in the video.

Qualification Round Requirements (Summary)

9.1 Platform Requirements

9.1.1 Base Station (Telemetry & Commanding)

Your video must clearly show the ANAV delivering the following telemetry outputs:

- Navigation data: Position (X, Y, Height), vertical velocity, horizontal velocity, safe-site coordinates

- Battery information: health and status

- Any additional telemetry relevant to the system

Command Modes:

- **Manual Mode:** System enters manual mode immediately after power-on and can be operated from the base station.

- **Autonomous Mode:** Triggered after receiving the auto-start command while in manual mode, initiating the autonomous tasks.

9.1.2 ANAV Safety Features

The ANAV must demonstrate automatic safe behavior during emergencies such as:

- Low battery

- Lost communication link

- Collision risk

- Software or hardware malfunction

- Control system faults

- Unforeseen deviations

During any of these, the ANAV should automatically enter safe mode and perform a controlled landing.

9.2 Qualification Round Tasks

Your edited video must clearly show the ANAV performing:

9.2.1 Stable Vertical Take-off

- Controlled, vertical-only take-off from the 1.2 m × 1.2 m home area

- Maintain steady upward motion to the hovering height of **3 m to 10 m**

9.2.2 Hovering

- Maintain stable hover for **at least 30 seconds**

9.2.3 Landing

- Land within the boundaries of the home position

9.2.4 Safety Feature Demonstration

- Demonstrate behaviors from section 9.1.2

9.3 Submission Requirements

9.3.1 Recording

- All tasks must be recorded **at your college**, in **HD resolution**, **with a visible time stamp**

9.3.2 Video Requirements

Upload:

1. One combined video covering **Tasks 9.2.1, 9.2.2, 9.2.3, 9.2.4**

2. A separate video describing **ANAV configuration and features**

Deliverables

1. Final Edited Video

- Fully edited

- Includes music, graphics, labels, transitions

- Clean representation of all required tasks and system details