Project Title – Counter Autonomous Drone

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Project Member

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Project Guide Name

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<Drone Dex>

We are developing a Autonomous Counter Drone(UAV) to counter threats from enemy aerial objects and attack feature

How we made

- **We made a Hexacopter (UAV) with high stability and higer flight time.**
- **Use Pixhawk flight controller and Raspberry Pi 4**
- **Used ROS 2 nodes and topics to communicate in real time ensuring No delay in MavLink Protocol.**

- **All the real tie data has been sended by telemetry module for real time monitoring**

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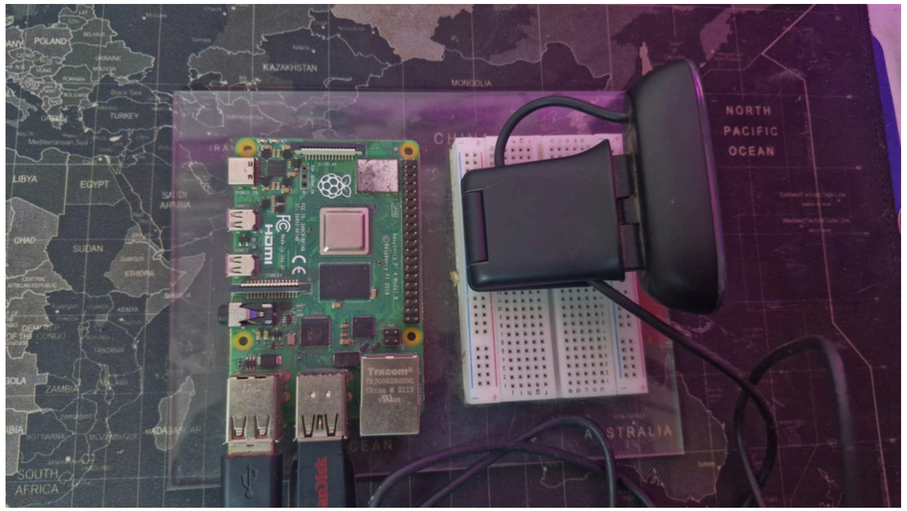
Key Innovation

- **Dual Detection Power: Spots enemy drones using camera AI + radio signals (invisible radar) – no single point of failure.**
- **Safe "Attack" Mode: Automatically flies to the threat area and hovers to intercept – non-violent, just positions for quick human response.**
- **Affordable Autonomy: Built on everyday tech (like Raspberry Pi and Pixhawk).**
- **Live logs va Rpi4 and data using telemetry module**



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TECHNICAL APPROACH

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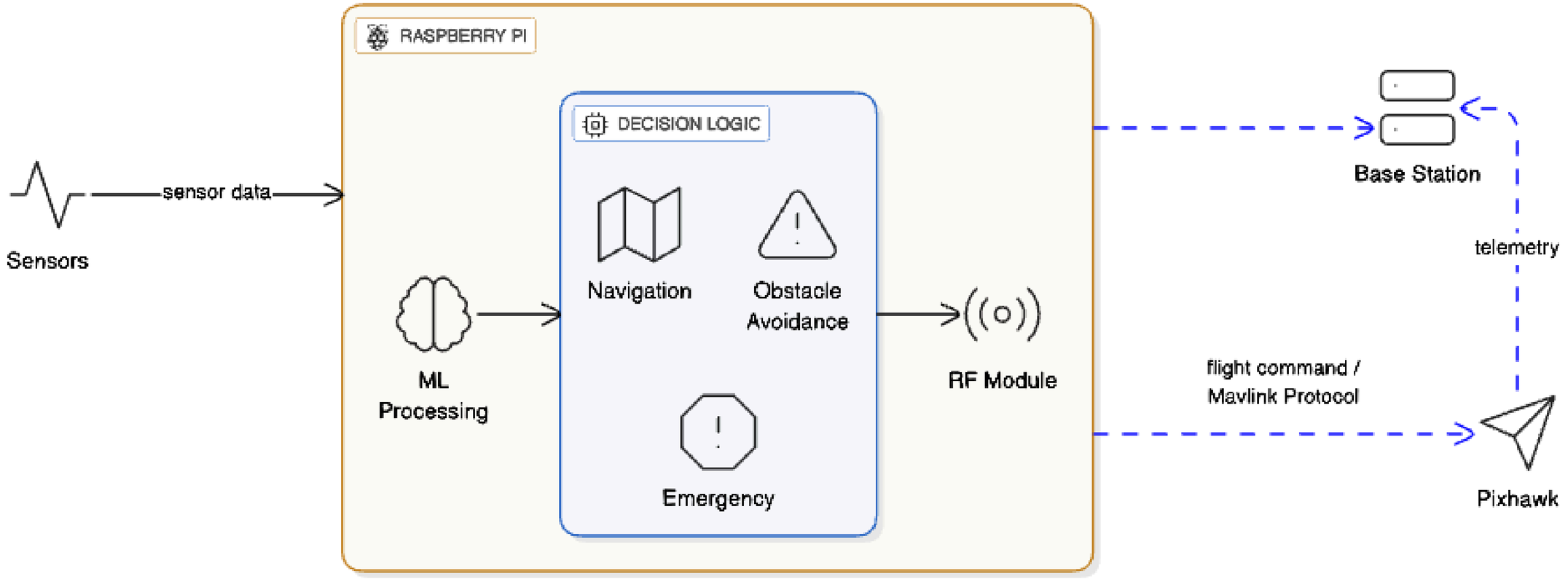

How it Works

- **Sense: Camera + RF module continuously monitor the area.**
- **Decide: Raspberry Pi fuses detections; confidence threshold set before action.**
- **Demo action: If confirmed, drone moves to a predefined safe demo zone, hovers, flashes LEDs and records a short clip.**