Project Synopsis/Project Concept Document
(Due: 25th January)

Project number	41
Project Title	GUI for Anti-Drone System
Document	DASS Project Concept Document
Creation date	24-01-2024
Created By	Medha Prasad (2022101034), Vinit Mehta (2022111001), Manasa Kalaimalai (2022101131), Prithvi Karthik (2022101020), Shailender Goyal (2022111023)
Client	Suraj Bonagiri: Founder, Arka Aerospace (Mentor) Arka Aerospace Pvt. Ltd. (Organisation)

Description

The project aims to further develop GUI for an Anti-Drone System that addresses the increasing challenge of small UAV airspace violations along Indian borders by developing an Anti-drone system. The GUI, built with Rust and Tauri, is currently in progress and requires additional features. These include user controls for engaging drones, dynamic map zooming based on drone proximity, visual representation of drone trajectories, kill markers on the map, a catalog for recorded events, and a settings tab for functionalities like updates and theme selection. The goal is to create an intuitive and user-friendly interface for army personnel, ensuring ease of use for individuals with minimal education background.

Profile of Users

End-users of the Anti-drone system range from high school graduates to highly educated individuals, including on-ground soldiers and air force officers. The design should prioritize simplicity for users with varying technical proficiency. Tailoring the interface to meet the specific needs of both on-ground soldiers and air force officers is crucial for effective use.

Usage Model and Diagram

1. The user can track rogue enemy drones on the map which are color coded to differentiate from friendlies on the field.
2. The user can instruct every friendly drone individually to move to a certain point.
3. The user can see the stats of all the friendly drones.
4. The user can assign targets to each friendly drone. Also the map shows icons to mark a kill, miss, etc.
5. The user can use manual controls and live video feed to conduct recon missions.

So in a nutshell, the user would be able to track and neutralize enemy drones using controls and data present on the screen in a easy to use user interface with features like dark mode etc.