

HealthSky: Transforming Medical Logistics



TEAM 114

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Due to the lack of laboratories in health centers, and the demand of blood samples examination, we designed drone system integrated with an application and a cooling system to transfer the samples and any other health logistics.

Introduction

Problem Statement :

Developing and assembling a drone with a cooling mechanism, secure sample handling, advanced navigation, and real-time tracking capabilities to efficiently transport medical samples in Saudi Arabia, while also providing a user-friendly application interface for real-time tracking, route optimization, and seamless communication among medical facilities.

Constraints :

- Battery life and range.
- prevailing hot weather.
- Reliability and maintenance.
- Landing and take off zones.

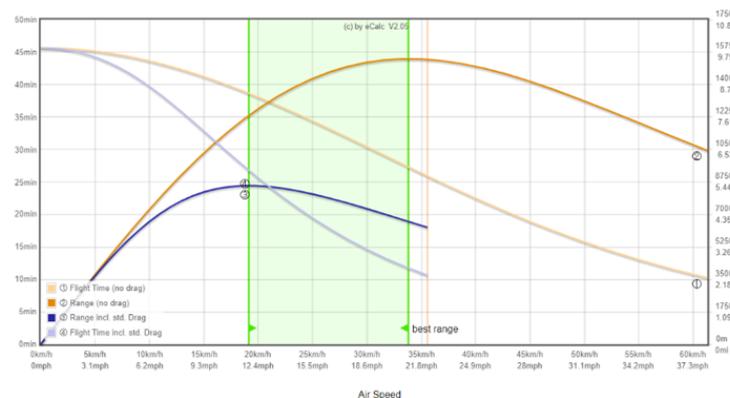
Target specifications :

Specification	Target
Speed	Speed of 35 km/h
Endurance	Endurance of 35 minutes
Weight	Weight of 7 kg
Payload Capacity	Payload Capacity of 2.5 kg
Range	Range of 7.5 km

Project Impact :

By transporting medical samples and supplies between hospitals and health centers, the project ensures timely diagnoses and treatments for patients. The efficient delivery of blood samples and units can enhance emergency medical responses, potentially saving lives in critical situations. Overall, the project enhances healthcare infrastructure, promotes equitable access to medical services, and contributes to better health outcomes for communities.

Testing Validation



Prototype Design



Conclusion

- Drone system for sample transport: medical samples, hospitals.
- Dynamic web platform: Simplifies communication.
- Overcoming temperature challenges: Cooling systems.
- Continuous monitoring, real-time tracking.
- Route Optimizing, fast and efficient delivery .