



# DRONE REDZONE

**Dr. Gobi Natesan<sup>1</sup>, Rohan R Surve<sup>2</sup>, Sooryajith Sajeev<sup>3</sup>, M Laksha<sup>4</sup>, Netroyum Sharma<sup>5</sup>,  
Nivetha M<sup>6</sup>, Truptishree J L<sup>7</sup>, Dr. Renu Rathi<sup>8</sup>**

Assistant Professor, Department of CS & IT, Jain (Deemed-to-be) University, Bengaluru, India<sup>1</sup>

Student, Department of CS & IT, Jain (Deemed-to-be) University, Bengaluru, India<sup>2-6</sup>

Student, School of Commerce, Jain (Deemed-to-be) University, Bengaluru, India<sup>7</sup>

Associate professor, Department of Commerce, Jain (Deemed-to-be) University, Bengaluru, India<sup>8</sup>

**Abstract:** Drone Redzone is an innovative application designed to facilitate the delivery of packages and goods via drones while ensuring the privacy and security of private properties. The app allows users to flag the locations of their private properties by setting and locating the radius of the property, thus enabling drone deliveries to be made by avoiding these private locations. This helps to ensure the confidentiality of private properties, government, and security-based properties. The app acts as a bridge between the user, company, and government, enabling the easy flow of new age deliveries. Drone Redzone connects users with companies that offer drone delivery services, making the process of ordering and receiving goods via drones simple and seamless. It also connects companies with government agencies to ensure compliance with all relevant laws and regulations.

Drone Redzone has been developed with the latest drone technology, logistics, and safety measures in mind. Safety is a top priority, and we have implemented measures to ensure that all drone deliveries are safe and secure.

We believe that our app has the potential to transform the way we think about and use drone technology. By enabling the delivery of goods via drones while maintaining the privacy and security of private properties, Drone Redzone has the potential to improve the delivery of goods via drones and reduce the overall carbon footprint of the transportation industry. Overall, Drone Redzone represents an exciting new development in the field of drone-based delivery services. We are excited to see the impact it will have on the industry and look forward to expanding its reach to new users and companies in the future.

**Keywords:** drone redzone, development, law , technology

## I. INTRODUCTION

The use of drone technology has completely changed how we perceive and engage with the world around us. Drones have innumerable uses in many different businesses, from aerial photography to package delivery. Yet, there have been growing worries regarding safety and security as a result of the increased use of drones. Unauthorized drones operating in restricted places like airports, military bases, and government facilities in particular present a serious concern. The idea of a "Drone RedZone" has been developed as a solution to this problem. Any unauthorised drone flying in the Drone RedZone will be instantly discovered and dealt with. This area has been defined as being off-limits to drone use. We shall explore the Drone RedZone idea and its ramifications in this essay.

## II. SYSTEM ANALYSIS

System Analysis for Drone Redzone could involve the following steps:

- Identify the problem: The problem that Drone Redzone aims to solve is the challenge of making drone deliveries by avoiding private properties while ensuring the confidentiality of government and security-based properties.
- Gather information: Research the drone delivery market and the regulations governing drone deliveries. Also, talk to potential customers to understand their needs and concerns.
- Brainstorming: Generate as many ideas as possible for how to flag the locations of private properties while maintaining confidentiality. This could include using geofencing technology or developing a proprietary system for property owners to flag their location.
- Evaluate and prioritize ideas: Assess the feasibility of each idea and determine which ones are most likely to be successful. Consider the cost, regulatory constraints, and potential impact on customers.



- e) Develop and test prototypes: Based on the most promising ideas, develop and test prototypes. This could involve creating a minimum viable product (MVP) or conducting a pilot test.
- f) Refine and iterate: Based on feedback and testing results, refine and iterate the prototype. Make changes and improvements as needed to ensure that Drone Redzone meets the needs of its customers.
- g) Launch: Finally, launch Drone Redzone to the market. Consider a soft launch to a limited audience to gather feedback and make further improvements before a full-scale product launch.

### III.IMPLEMENTATION

The implementation of Drone Redzone as a solution for secure and efficient delivery of packages and goods via drones appears to be promising. Through its ability to allow users to set and locate the radius of their private properties, the app can help ensure the confidentiality of sensitive locations while still enabling deliveries to be made. This could be particularly useful for government and security-based properties that require a high level of privacy and security.

Moreover, the app's ability to act as a bridge between the user, company, and government could help streamline the delivery process and improve communication between all parties involved. This could potentially lead to faster and more efficient delivery of packages and goods.

However, the success of the app will depend on its ability to address potential challenges or limitations such as safety concerns and regulatory compliance. Further research and testing may be needed to fully understand the app's potential benefits and limitations.

Overall, Drone Redzone represents an innovative development in the field of drone-based delivery services, and its potential for success is promising. Further investment and development may be necessary to fully realize its potential, but the concept is certainly worth exploring.

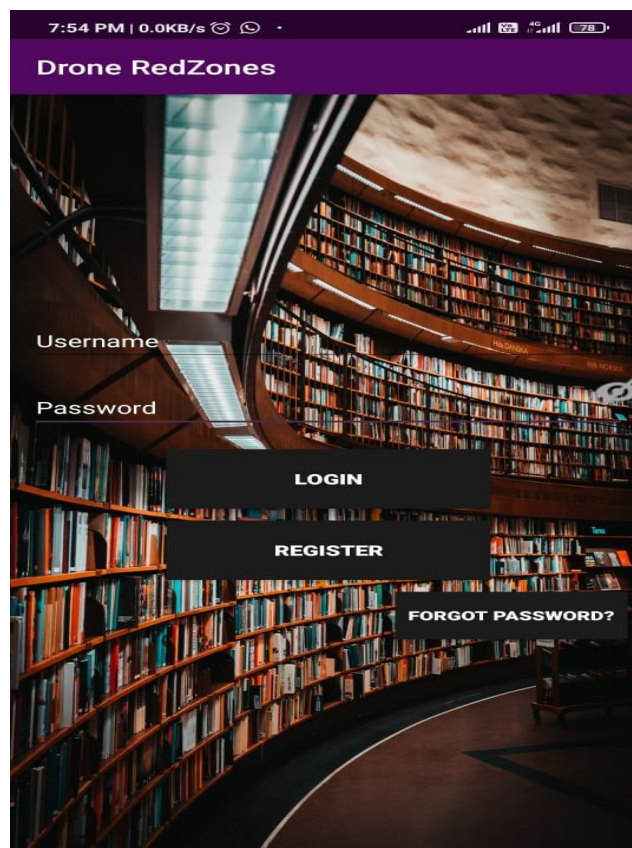


Fig 1.1(Login Page)

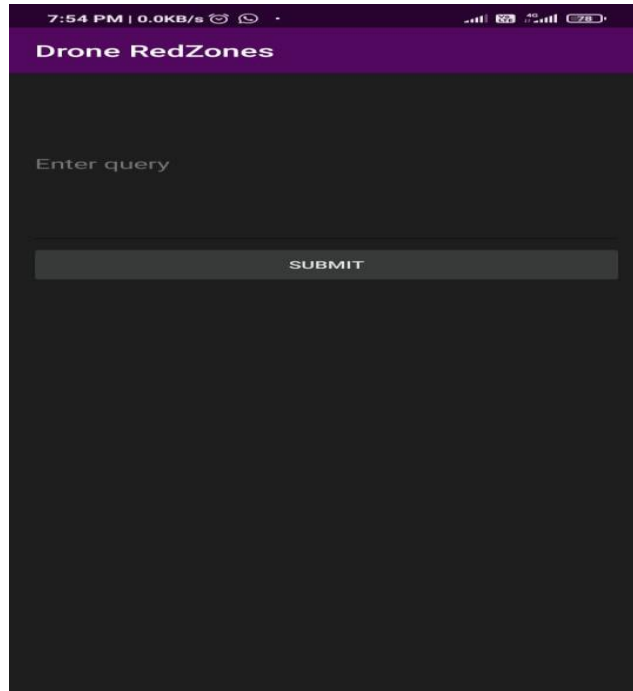


Fig 1.2 (Query Page)

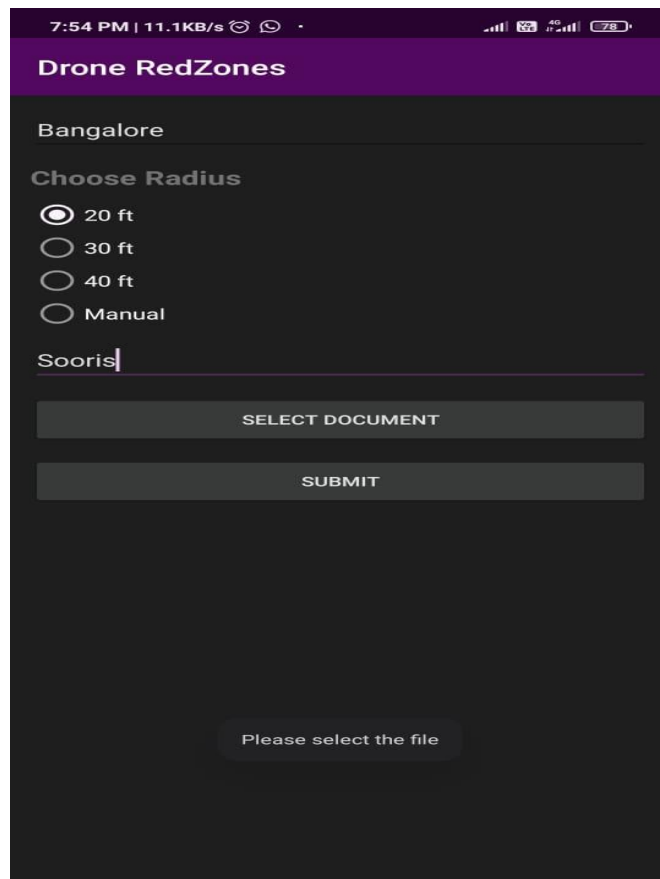


Fig 1.3(Selecting Radius Page)

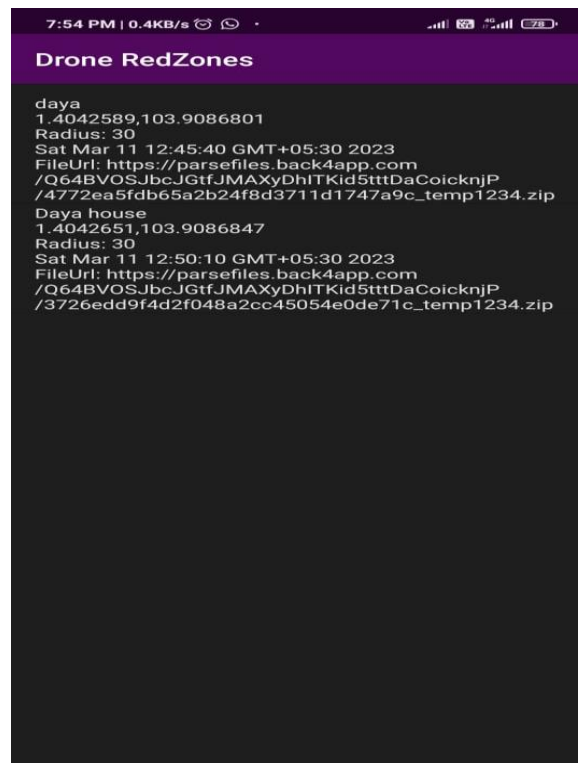


Fig 1.4 (Information Page)

#### IV.CONCLUSION

Drone Redzone is an innovative application that has the potential to revolutionize the delivery industry by facilitating the delivery of packages and goods via drones. The app offers a unique solution to the issue of drone deliveries to private properties, by allowing users to set and locate the radius of their property, thereby ensuring the privacy and security of government and security-based properties. By acting as a bridge between the user, company, and government, Drone Redzone can enable the easy flow of new age deliveries, while maintaining the confidentiality of sensitive locations.

##### A) Future Work

- **Autonomous navigation:** At the moment, most drones must be operated by a person. Yet, scientists are attempting to create drones that can navigate on their own. This would include incorporating cutting-edge sensors and algorithms that enable drones to fly and carry out missions independently of human control.
- **Enhanced sensing and perception:** Drones are becoming more and more adept at sensing and understanding their surroundings. Future research in this field will concentrate on creating more sophisticated sensors and perception algorithms that provide drones the ability to manoeuvre through challenging settings and complete challenging jobs.
- **Longer flight time:** The short flight times of drones are one of their main drawbacks. To increase the drones' flying time, researchers are developing more effective battery technology and looking into alternative power sources like solar energy.
- **Human-Drone Interaction:** As drone use increases, it will be necessary to create better human-drone interaction interfaces that make it easier for people to engage with and manage drones.
- **Integration with other technologies:** To enable more sophisticated applications, drones have the potential to be combined with other technologies like AI, IoT, and blockchain. Exploring the possibilities of these technologies in combination with drones will be the main goal of future development.



## REFERENCES

- [1]. 2020. Chung, S.H., Sah, B., and Lee, J. A study of the state of the art and future directions for optimising drone and drone-truck combination operations. 123, page 105004 of Computers & Operations Research. [1]
- [2]. 2020. Lamptey, E., and Serwaa, D. Ghana uses zipline drone technology to transfer COVID-19 samples. 67–71 in HighTech and Innovation Journal, 1(2).[2]
- [3]. Heermann, P.D.: Unmanned Aerial Systems (No. SAND2015-9558PE). Sandia National Lab. (SNL-NM), Albuquerque, NM (United States) (2015) [3]
- [4]. Bradshaw, K., and K. James, 2020. utilising drone technology with deep learning to identify plant species in the field. pp. 1509–1519 in Methods in Ecology and Evolution, 11(11). [4]
- [5]. G. Macrina, L.D.P. Pugliese, F. Guerriero, and G. Laporte, 2020. A review of the literature on drone-aided routing. Emerging Technologies in Transportation Research Part C, page 102762 in volume 120.[5]
- [6]. 2020; Lykou, G.; Moustakas, D.; Gritzalis, D. A survey of cyberattacks and anti-drone sensing technology for protecting airports from UAS. p. 3537 of Sensors, 20(12).[6]
- [7]. It was published in 2020 by Bera, B., Saha, S., Das, A.K., Kumar, N., Lorenz, P., and Alazab, M. Secure data transport and collecting plan for a 5G-based Internet of Things environment that supports drones. 69(8), pp. 9097–9111 of the IEEE Transactions on Vehicular Technology.[7]
- [8]. Bushell, J., and Merkert, R. 2020. Handling the drone revolution: A thorough assessment of the literature on the usage of aerial drones today and potential future tactical moves for their efficient management. 89, 101929, Journal of Air Transport Management.[8]
- [9]. It was published in 2021 by Phang, F.A., Puspanathan, J., Nawi, N.D., Zulkifli, N.A., Zulkapri, I., Harun, F.K.C., Wong, A.Y.K., Alsayaydeh, J.A., and Sek. incorporating drone technology into engineering students' service learning. 16(15), p.78, International Journal of Emerging Technologies in Learning (Online).[9]
- [10]. It was published in 2021 by Angjo, J., Shayea, I., Ergen, M., Mohamad, H., Alhammadi, A., and Daradkeh, Y.I. Future mobile networks' control of drone handoffs will use 6G technologies. IEEE Access 9, 12803–12823, 2009.[10]