



DeliDrone

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DeliDrone

"DeliDrone," aims to revolutionize urban delivery services by integrating drones for immediate delivery.

The Problem

Traditional delivery services are slow and resource-intensive, for example, it takes 2-3 days to deliver goods from a local merchandiser, and it needs significant human labor, logistics, and vehicle usage.

This inefficiency leads to higher costs and environmental impact.



DeliDrone

DeliDrone is a local delivery solution that uses drones to deliver all type of good.

Direct delivery solution between the end-user and the merchandiser.

Immediate delivery solution and require the minimum human labor.

Less environmental impact.

Main target group: DeliDrone targets individuals and businesses, such as shops and restaurants, that offer home delivery services. DeliDrone aims to meet the needs of customers seeking immediate and reliable delivery options.



Description:

DeliDrone is a solution designed to improve urban delivery by using drones. The project aims to develop a system that includes a website, and possibly a mobile app in the future, to manage drone deliveries.

The main goal is to create a fast and efficient delivery service that reduces the time and resources needed compared to traditional delivery methods.

The solution has three main parts:

1. **Backend:** This is built using Java. It simulates drone hubs, manages drones, and optimizes their routes to ensure efficient deliveries.
2. **Frontend:** eventually, this should include two dashboards developed using TypeScript. The client dashboard allows users to request and track deliveries, while the merchandise dashboard helps businesses manage their orders and deliveries.
3. **Future Mobile App:** There are plans to develop a mobile app to further enhance accessibility and convenience.

By using drones, "DeliDrone" aims to provide a quick, cost-effective, and environmentally friendly delivery option.



Technical Challenges:



DeliDrone concept is unique, that means:

- Nothing to compare with.
- Nothing to inspire.

During the development, I found that there are a lot of factors that needs to be considered for a simple delivery operation.

That leads to the need of many technical and data resources, which not widely available.



EXAMPLES

- Weather conditions (heat, wind, rain ...etc).
- Drone load capacity.
- Battery life and battery efficiency during different weather condition.
- Delivery location status.
- etc



My Approach

WAY OF WORK



I developed "DeliDrone" using agile methods to ensure flexibility and continuous improvement.

The project was divided into sprints. At the start of each sprint, I set clear goals and tasks, focusing on specific features like backend drone simulation or frontend dashboards.

Stand-up meetings helped track progress and address any obstacles promptly.

After each sprint, I conducted a review and retrospective to evaluate the work done and identify areas for improvement.

Because of the nature of the solution, it needs a lot of time to develop a complete functional solution, there for, I tried to priorities the delivery as following:

- Database.
- Backend simulator (which is my top priority)
- Simple frontend page.



PRIORITY





THANK YOU!
