

## Cloud-Connected Automation and Optimization for Drones

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TEAM **S24-49** 

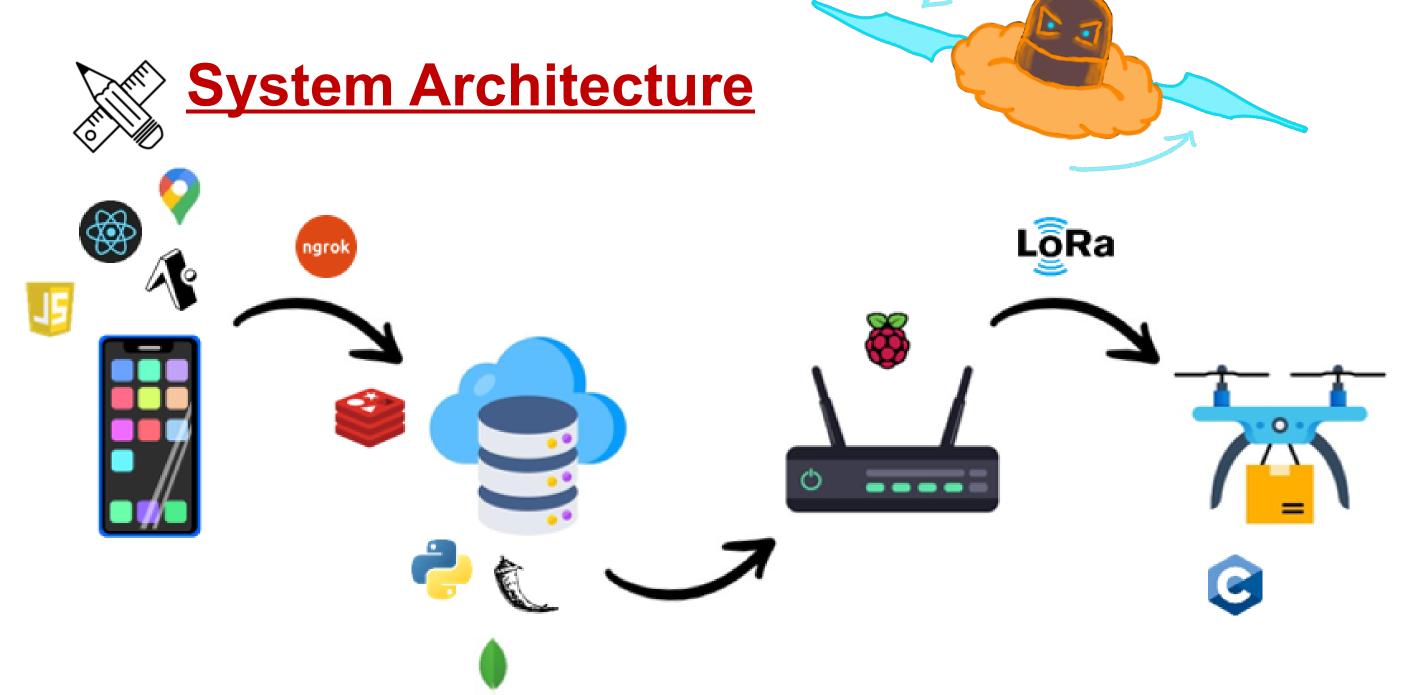


### Recognize the Need

Dynamic environments require adaptive route planning

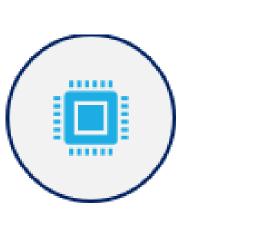
> Drone Automation control requires training or technical skills

> > Reliable communication





## **Project Challenges**



Acquiring Familiarity with New Tools, Software, and Hardware



**Ensuring Proper** Weight Distribution of the Drone



Optimizing Battery Life



Calibrating Drone Motors



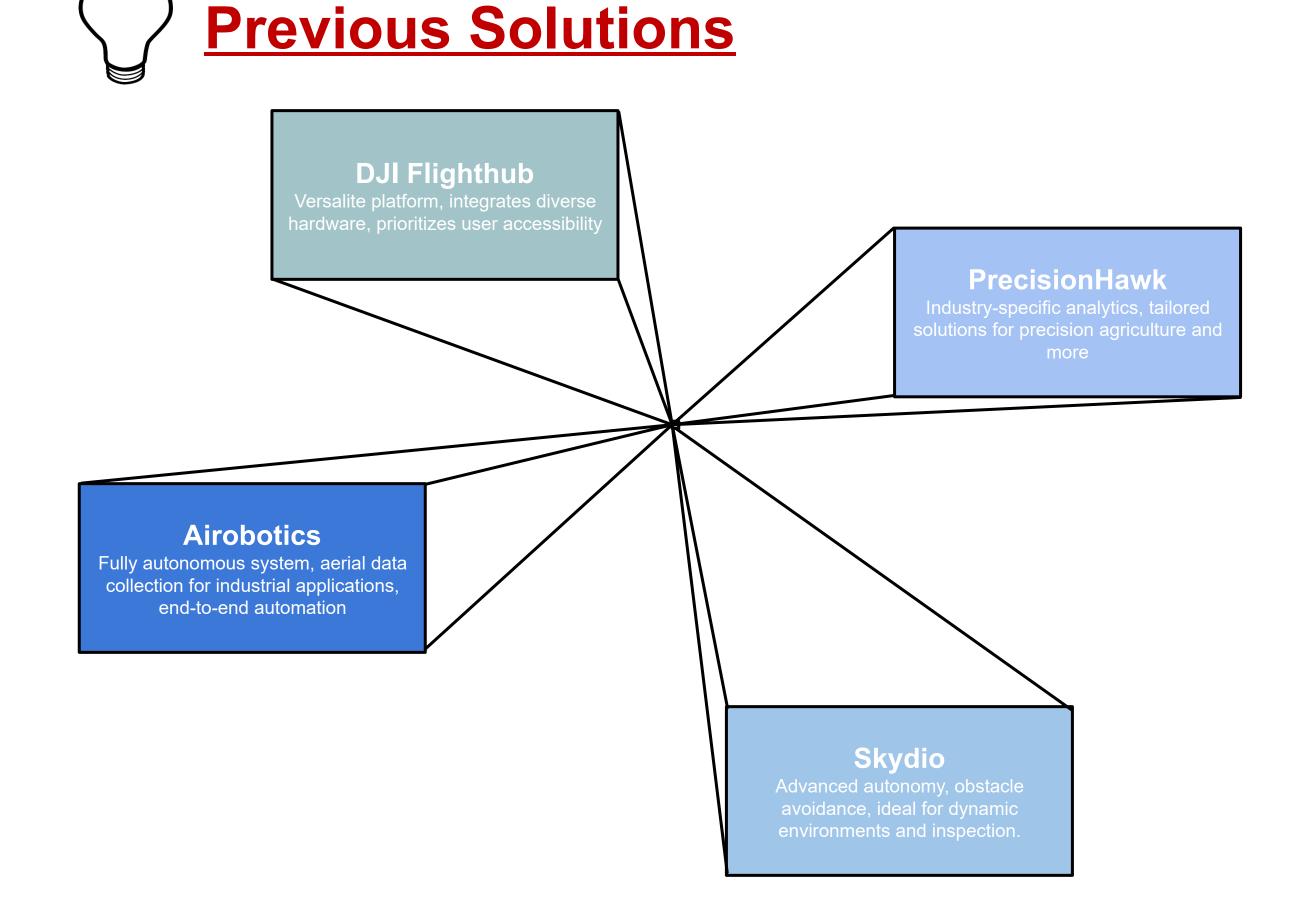
Conducting Testing and Validation



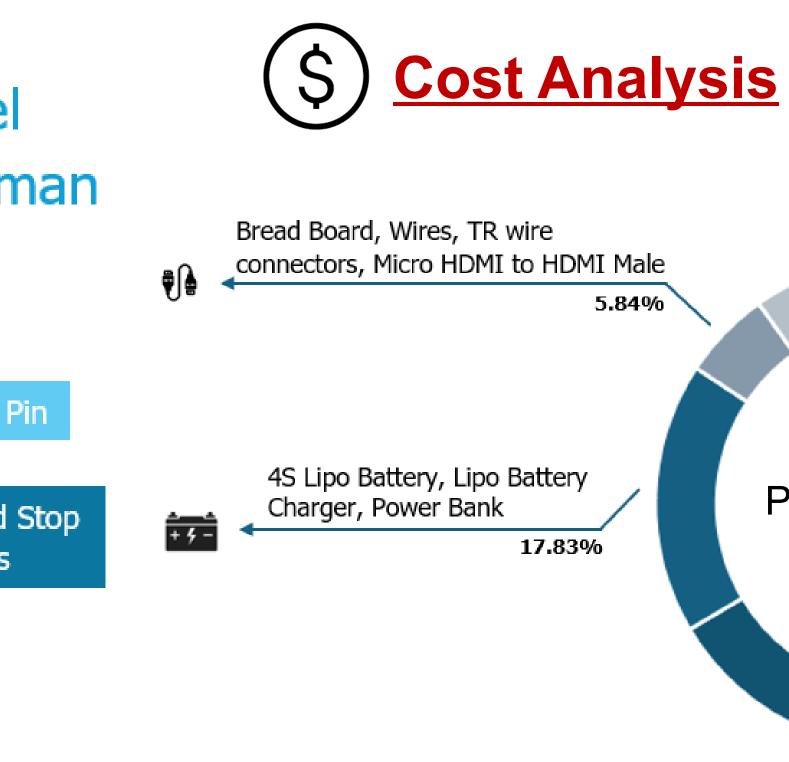
Planning for Scalability and Maintenance

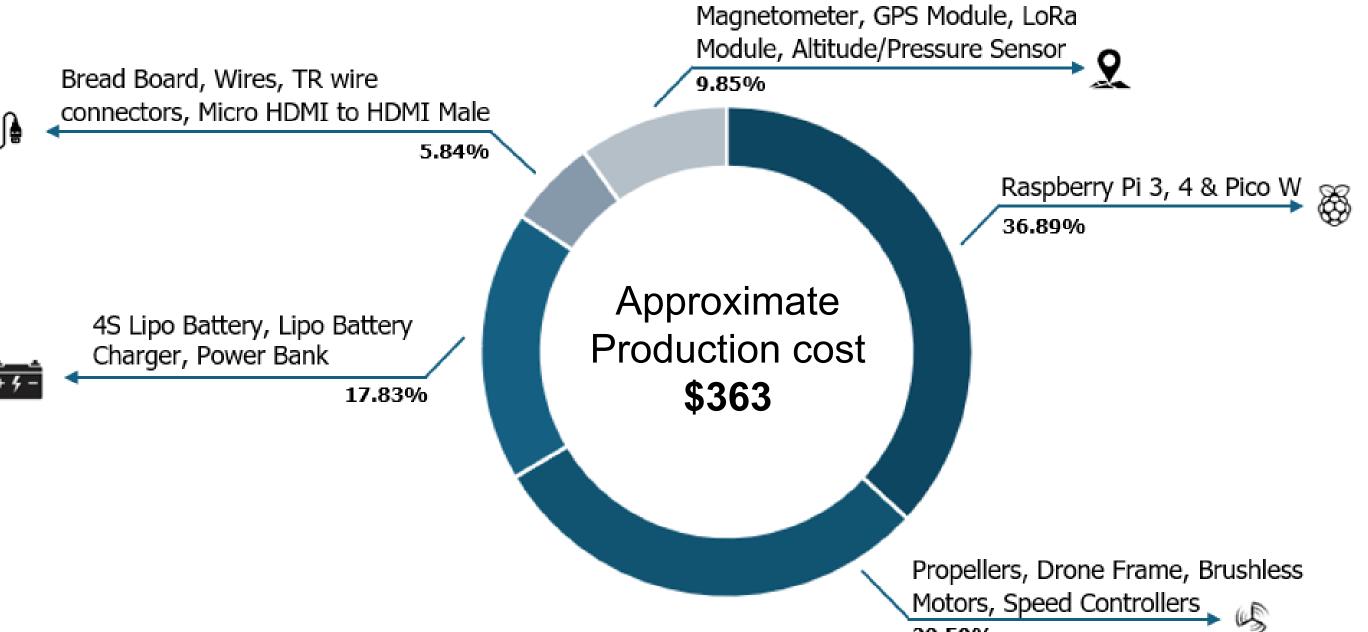


Full Stack Implementation

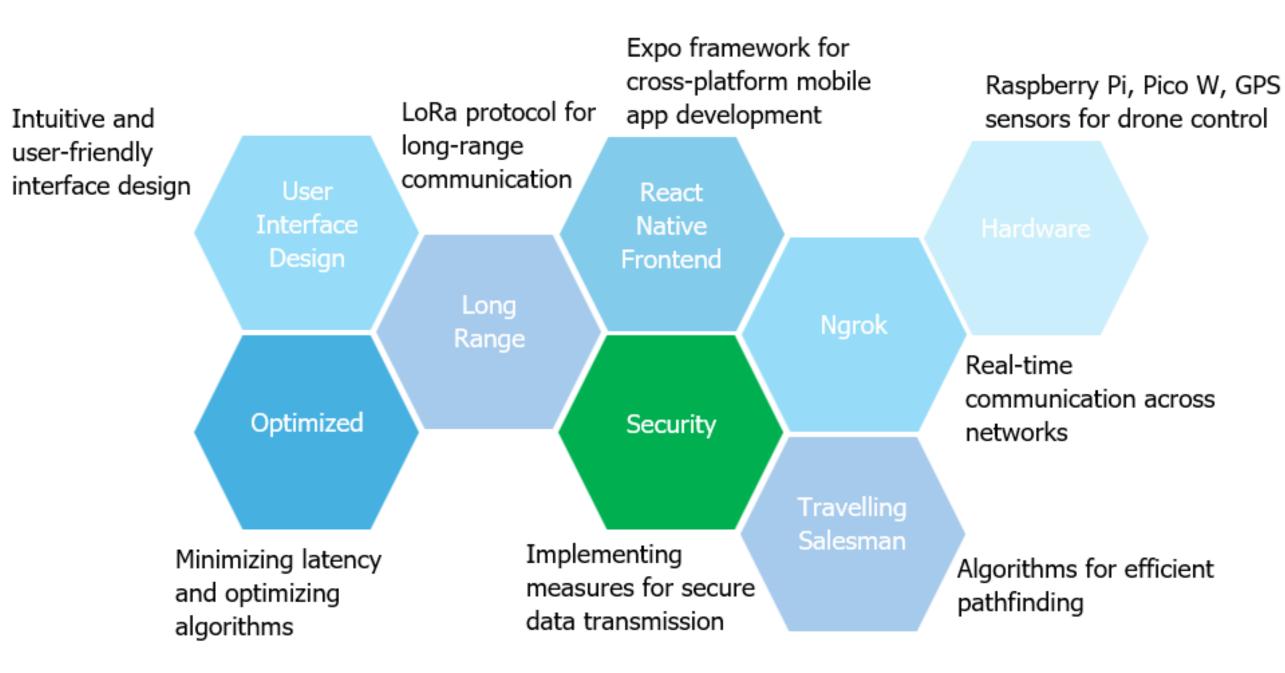




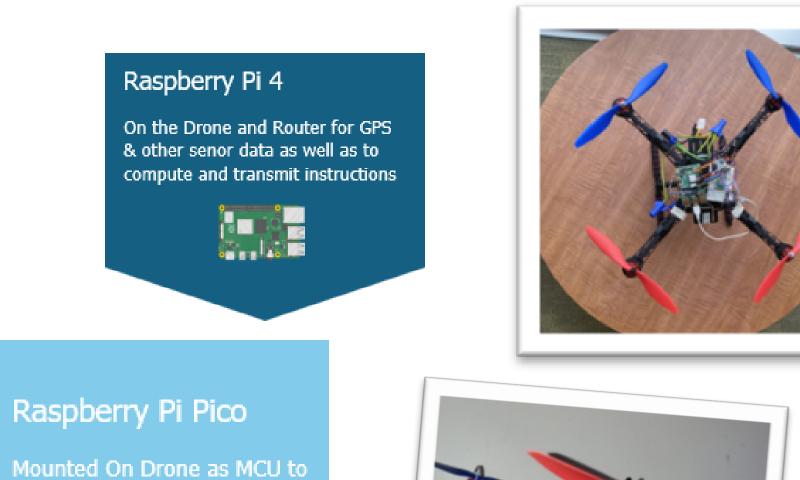




# **Benefits**



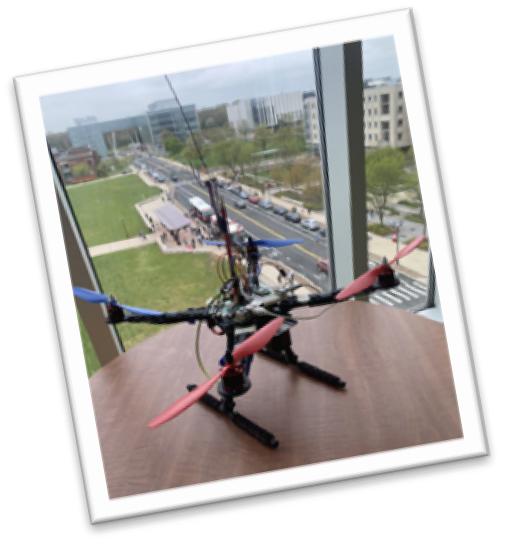




manage Drone Motor control



HopeRF RFM95W LoRa enabled Radio: Sub-GHz Radio module with LoRa capabilities to enable long range communication



## ( Future Potential









**Agricultural Monitoring** Film & Photography & Spraying

## References & Acknowledgements

We would like to thank Professor Maria Striki, Ivan Seskar, Kevin Wine.

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- [3] RS Components. Electronics Design and Test Toolkit. n.d. PDF file