**Homework 4**

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**Summary**

Stanford researchers propose a transit-based delivery drone system that could expand drone delivery range in cities by using buses as base stations. The system could potentially quadruple delivery drone range in cities like San Francisco and Washington, D.C. However, landing drones on moving buses and accounting for delays would need to be addressed before implementation. Modifying the public transit network could improve the system's efficiency, and the framework can be modified to optimize other objective functions. Further research is needed in this area.

**New facts that I didn't know before**

I was surprised to learn that landing drones on moving buses could be a practical challenge. Also, the researchers found that D.C.'s larger area of operation with a less extensive bus network than San Francisco could create more bottlenecks for drone deliveries. It's interesting to think about how modifying the public transit network could improve the efficiency of the system.

**Some ideas from this text that could be used in the future include:**

1. Optimizing drone routes based on which drones should make which deliveries in what order, and when they should use buses.
2. Modifying the public transit network to improve the efficiency of the delivery drone system.
3. Modifying the framework to optimize other objective functions such as maximizing energy efficiency or minimizing flight times over residential areas.
4. Modeling constraints such as delivery, transit connections, and no-fly zones to ensure safe and efficient drone operations.