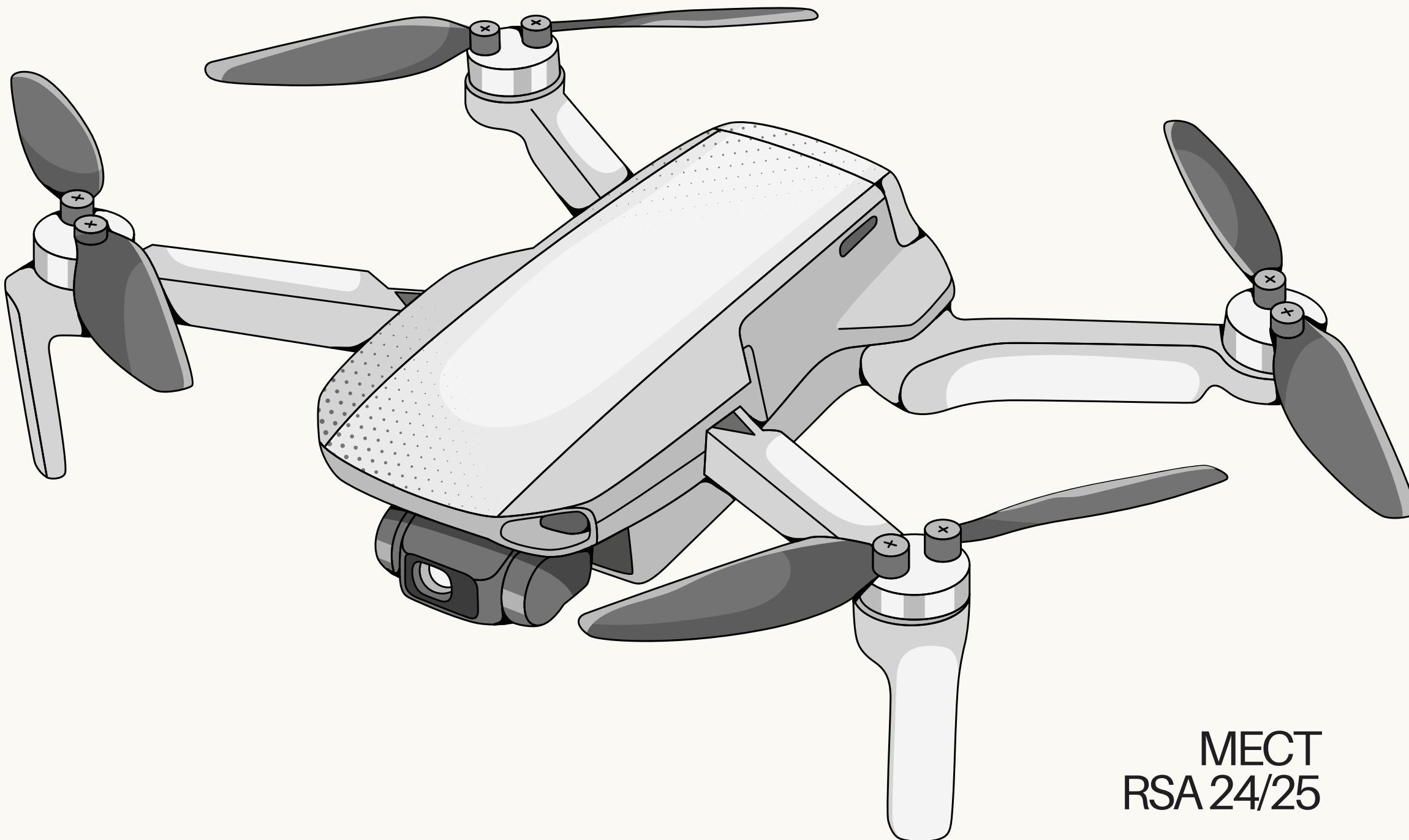


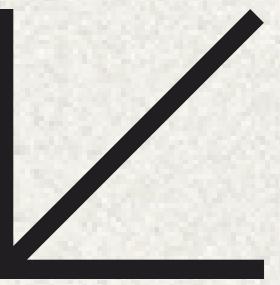
T.R.A.L.A.L.E.R.O

(TACTICAL RECON AND AERIAL LOGISTICS
FOR AUTONOMOUS LOCALIZATION ENGAGEMENT AND
ROUTING OPERATIONS)



Anderson Aoki [108579]
&
António Almeida [108250]

MECT
RSA 24/25



Introduction

Autonomous vehicles face significant challenges in locating available parking in dynamic urban settings due to limited onboard sensor visibility, lack of elevated situational awareness, and absence of shared real-time perception data infrastructure.



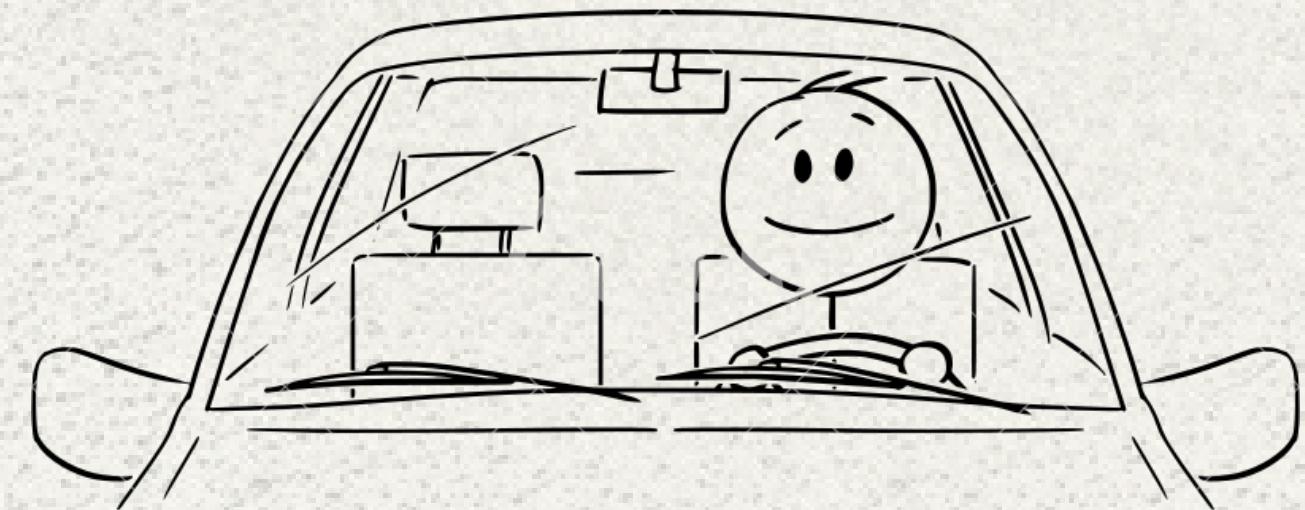
Use Case

In a smart city, an autonomous vehicle requires parking near a designated building. A drone is dispatched on-demand to survey the area due to the AV's limited visual access

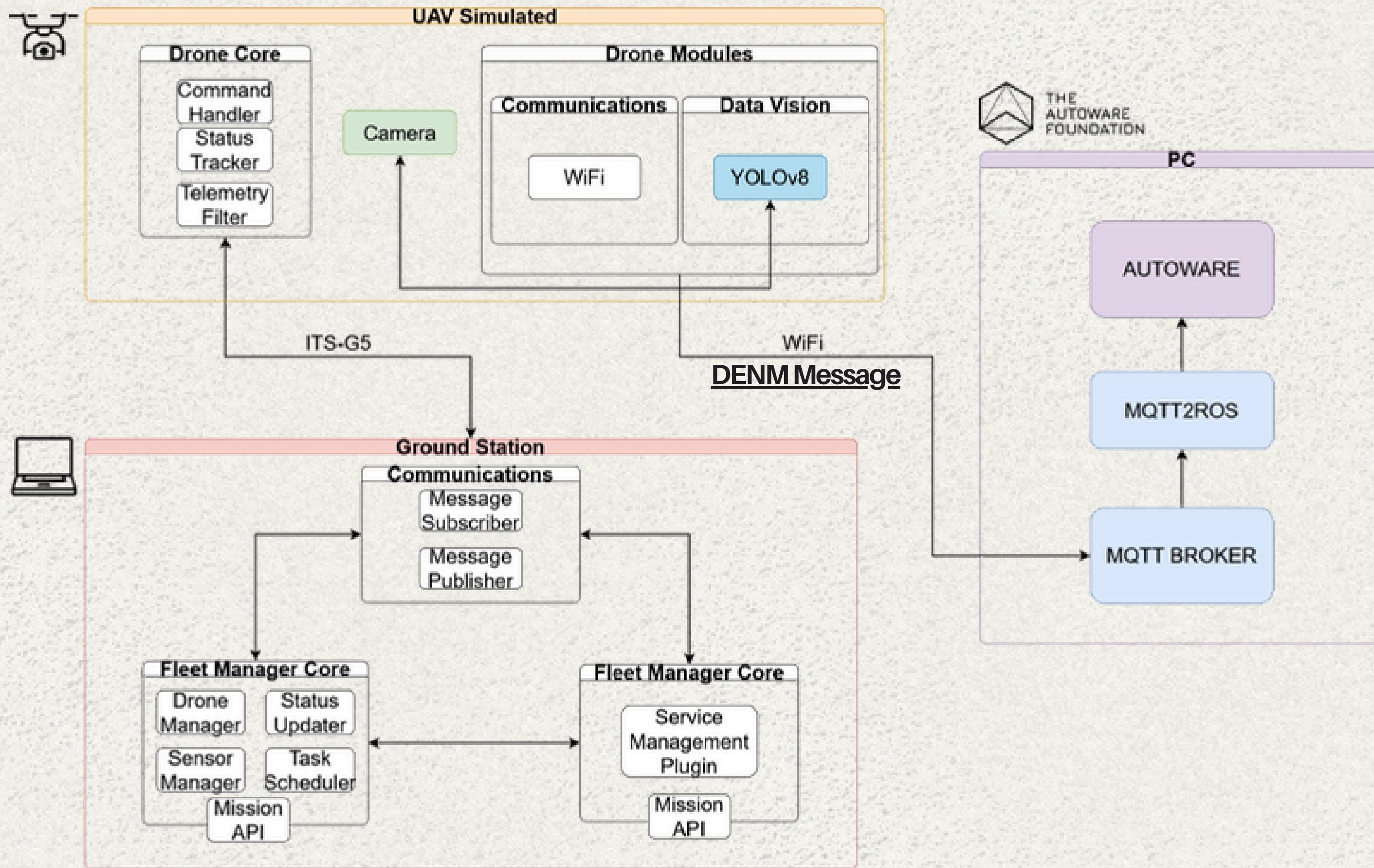


Objective

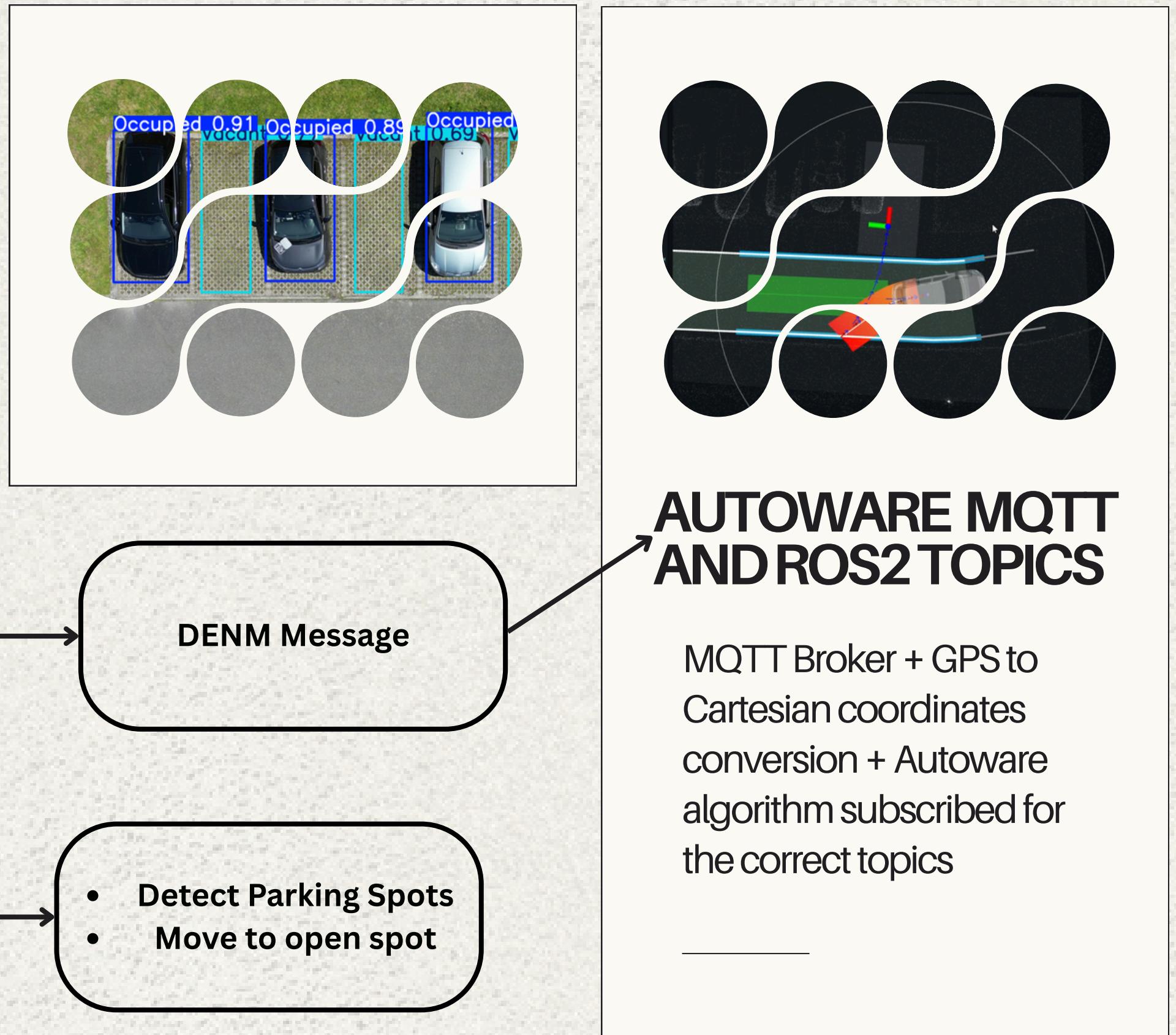
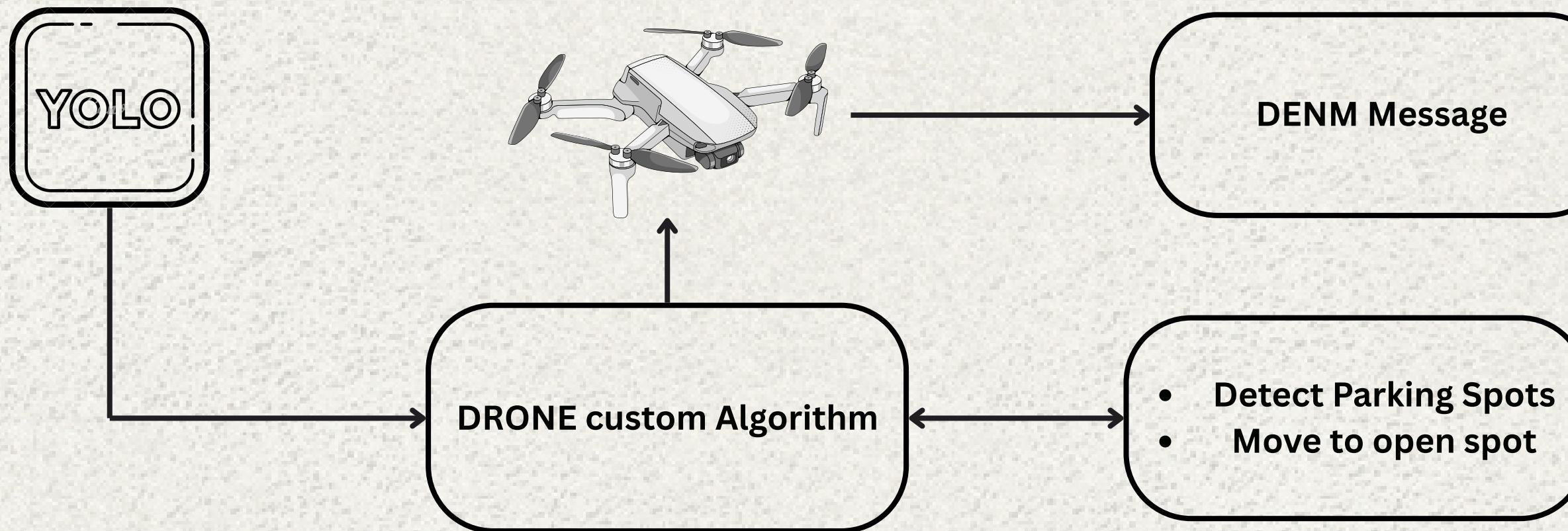
- Autonomous Drone Navigation
- Computer Vision-Based Parking Spot Detection
- Inter-System Communication via DEMN
- Autonomous Vehicle Reaction and Navigation



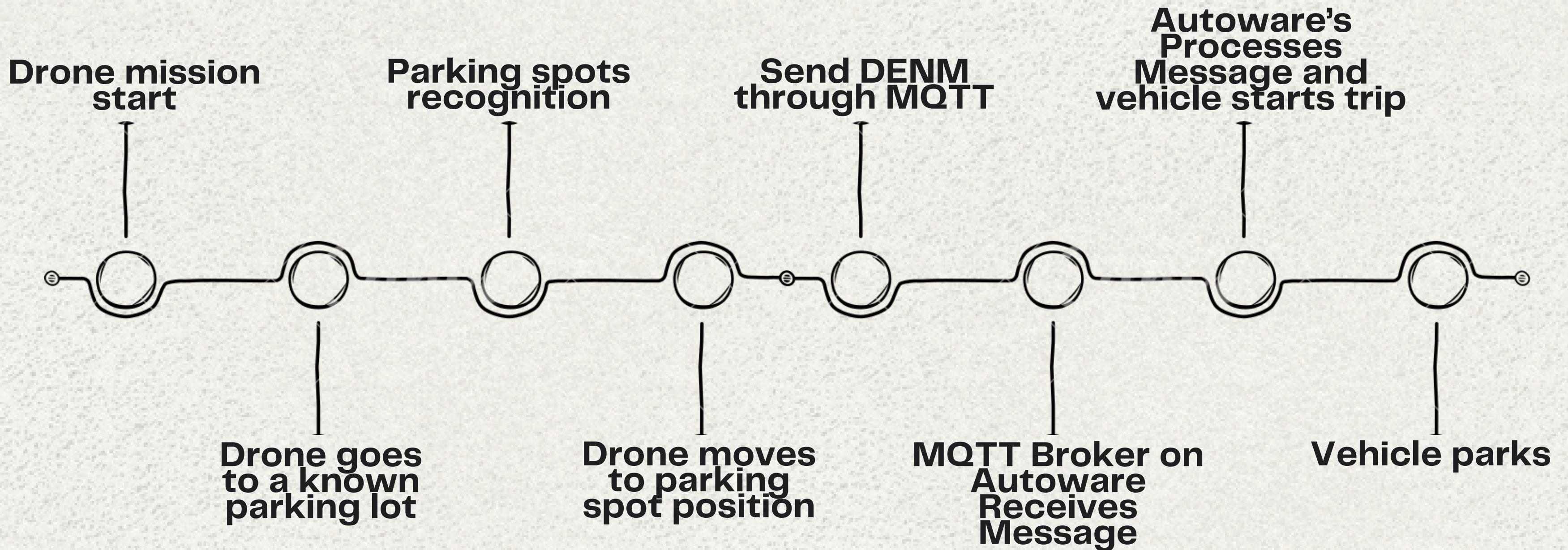
ARQUITECTURE



Algorithm Implementation



Timeline



DEMO



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Share

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Watch on YouTube

T.H.A.N.K Y.O.U

T.R.A.L.A.L.E.R.O Handles Aerial Navigation and Knowledge,
Yielding Operational Unification

Tactical Recon and Aerial Logistics for Autonomous Localization

Engagement and Routing Operations