

NRI: FND: COLLAB: Distributed, Semantically-Aware Tracking and Planning for Fleets of Robots



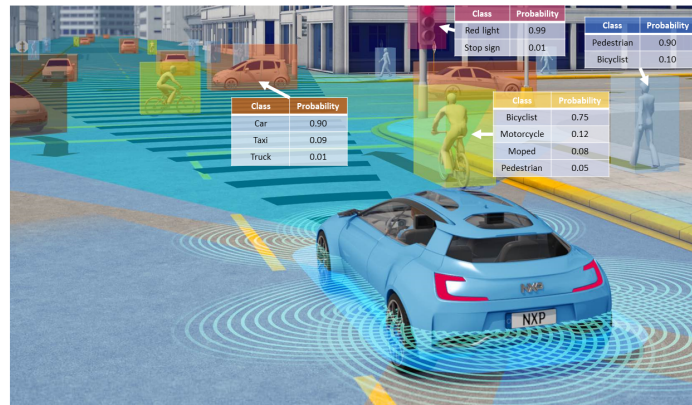
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10/1/2018 – 9/30/2021

Challenge

- Ensure safe and dependable operation of CAVs or drones in a fast-paced dense urban environments



Solution

- Create distributed memory architecture by combining
 - Multi-target Bayesian filters
 - Online, distributed tessellation algorithms
- Develop semantically-aware, online path planning algorithms
 - Account for range of possible reactionary behaviors of other objects

Scientific Impact

- Use is distributed sensor networks
- Use in other unstructured environments (e.g. homes)

Broader Impact

- Improve AV safety
- Support student mentorship at all levels (undergrad, MS, PhD)
- Inclusion in courses and senior capstone projects