

# Particle Filter based Object Detection

## EL2320 Applied Estimation Project

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### **Abstract**

In this project, a particle filter is implemented to track selected object in the video. Two methods of observation models are tested: single colour comparison and histogram based colour distribution model. As a result, the latter method to a large extent reduces the risk of lost tracking according to colour variance, as it is a more reliable way to represent real world object. However, it also shows to be sensitive to colour especially when illumination changes or background noises.

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