Homework 4 - experiments
M1522.001800 Computer Vision (2019 Spring)
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1 Tracking a Car

What kinds of templates work well for tracking?
rigid object which have lots of edges.

At what point does the tracker break down?
when it meets other object that have similiar intensity with target object.

Why does this happen? At that point, the tracker have hard time to find global optima
because of lots of noise.

2 Tracking Runway Markings

Contrary to car video, the tracker works well in landing video because landing point(number)
has many edges and near enviornment does not occlude or interfere it. In this video, by
tracking number 35 and keeping observing it. we can find angle with this landing point
and using like stereo, we can find distance between helicopter and landing point. Then,
may be, we can find what direction and speed is needed for auto landing.

2.1 Template Update

¡pros¿ we can avoid some local optimals because by setting update cycle we can ignore
various outer effects like occlusion, shading.

¡cons¿ if update cycle is too large, then we can't assume that Δp and Δx is not small
enough. So, the tracker may cause malfunctioning.