

Fast landing on moving vehicle

Navigation for Flying Robots - Free style project

Team “Roter Baron”

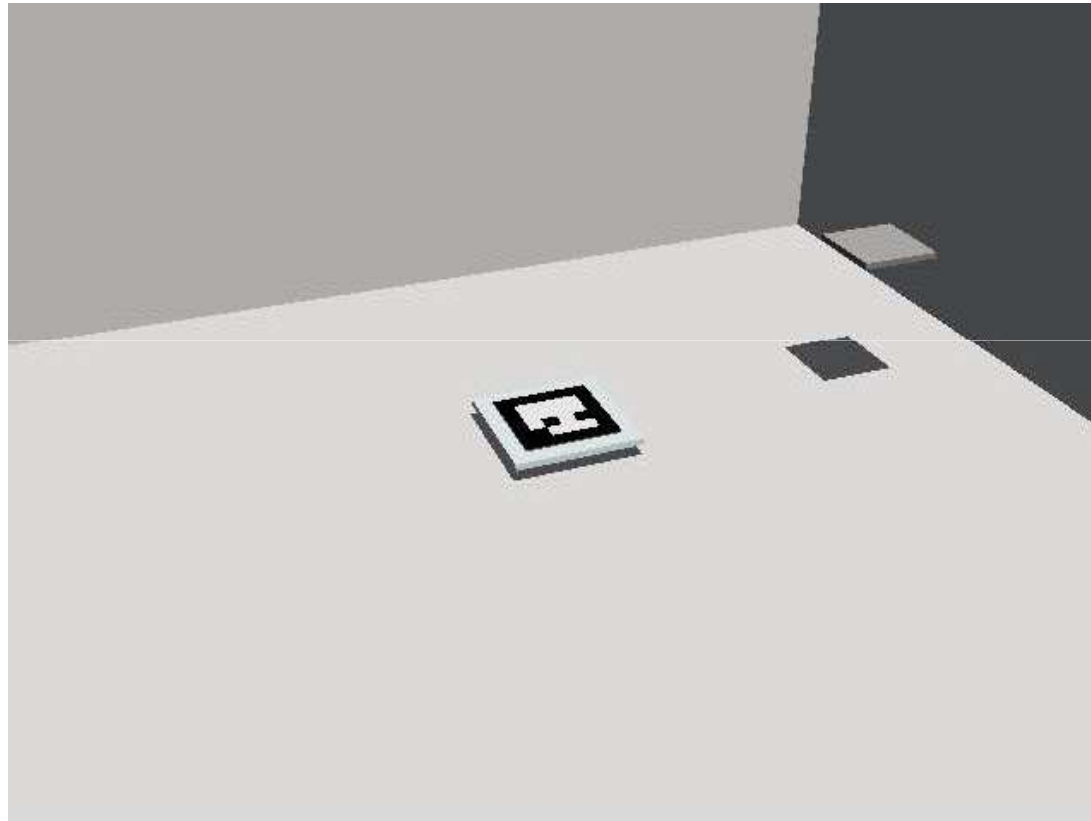
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Motivation



Rapid decend...to save the pandas! (with magnets)

Faster landing idea



The Challenges

- Approaching target with **switching cameras**
- Needs good approximation of target movement
- Needs to **compensate time-lag** between registration, progressing and steering
- Needs to have emergency **save-routine**

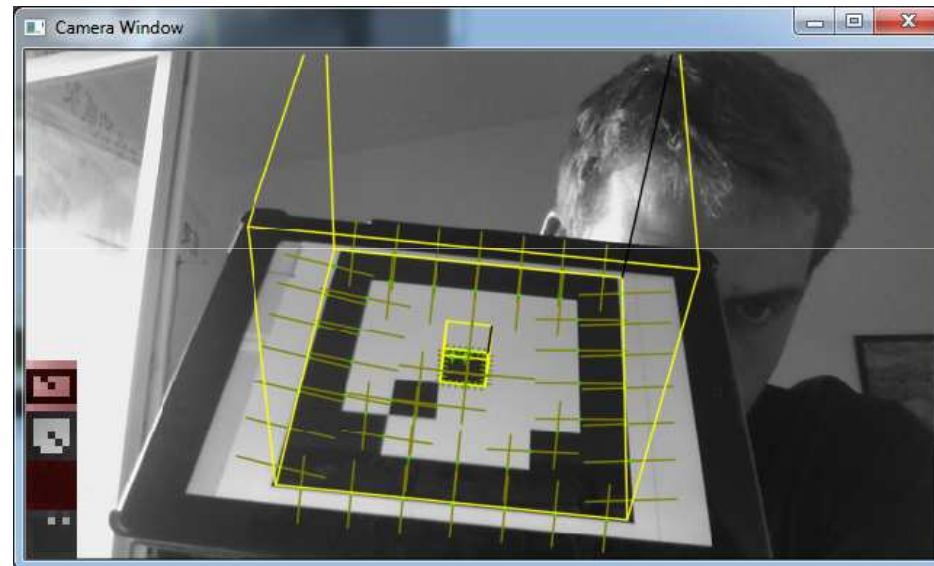
So how do we do it...?

- First **ascend** and look for the vehicle
- once found, **approximate** its **movement** with Kalmanfilter and start to follow
- aproach the vehicle from behind, find the smaller marker and touch down
→emergency restart if needed
- save the pandas 😊



What have we done so far

- we installed **Ubitrack** (hello boost, scons, opencv...)



- now we have a state-of-the-art marker detector which gives us the exact location of the marker (w.r.t. the camera)