Robotics, vision, and control

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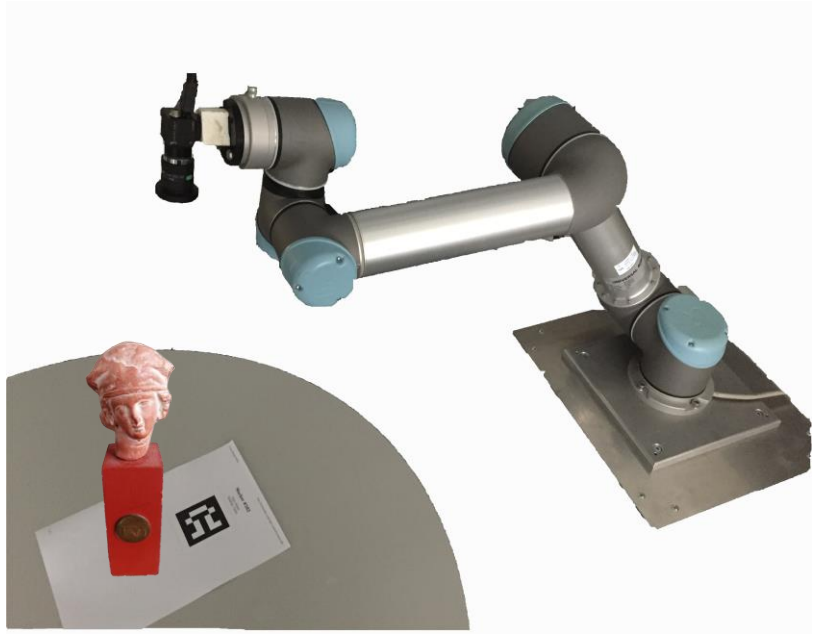
Overall aim of the vision part

- Define a proper computer vision pipeline to model a 3D object, estimate its pose and tells it to the robot (in the robot ref).



Then you can pick it by estimating the trajectory using the knoledge from the previos part of the course

Program of the vision part

- Acquisition pipeline,
- 2D and 3D analysis,
- Hand-Eye calibration,
- Object-to-camera pose estimation,
- Excercise in ICElab https://www.icelab.di.univr.it/

Final exam for the vision part

- Homeworks are assigned for each lecture,
- Each homework represents a step of the pipeline

The pipeline will compose the final project

- Students use their own object, that should be i) modelled, ii) analysed, iii) located in the robot frame