

Master's Thesis, Forschungspraxis, Interdisciplinary Project

# Hand-Object Pose Estimation with Deep Learning

In this project the task is to fit a parametric hand mesh model and a set of rigid objects to a sequence of multi-view RGB-D cameras. Existing models for hand key-point detection and 6DoF pose estimation for rigid objects models have significantly evolved in recent years. Our goal is to utilize such models to estimate the hand and object poses.

## Related Work

1. <https://dex-ycb.github.io/>
2. <https://www.tugraz.at/institute/icg/research/team-lepetit/research-projects/hand-object-3d-pose-ann>
3. <https://github.com/hassony2/obman>
4. <https://github.com/ylabbe/cosypose>

## Prerequisites

- Knowledge in computer vision.
- Experience about segmentation models (i.e. Detectron2)
- Experience with deep learning frameworks PyTorch or TensorFlow(2.x).
- Experience with Pytorch3D is a plus.

## Contact

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## Advisors

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