UNIVERSITÄT DES SAARLANDES
Prof. Dr.-Ing. Eddy Ilg
Computer Vision and Machine Perception Lab
ilg@cs.uni-saarland.de

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3D Computer Vision

Assignment 3: Camera Calibration

Submission Deadline: **Dec 18th 8am**

The majority of 3D computer vision applications require a known camera calibration. In the following exercise, you will learn how to calibrate the camera from multiple views of a planar checkerboard pattern. The exercise gives 14 points in total.

Privacy Note: Please note that you are not allowed to publish the solutions to any of the exercises publicly.

Implementation: Please implement your solution in the jupyter notebook `visualization.ipynb`. The images are supplied with the notebook.

- Q1 [5 Bonus Points] Normalize 2D and 3D points.
- Q1 [6 Points] Compute the homography for each image.
- Q2 [6 Points] Compute calibration and extrinsic matrices.
- Q2 [2 Points] Project the 3D points for each image and compute the error to the original keypoints.

Best of Luck!