Masterprojekt Poster:

Overview:

* Locate the individual grapes at a grape bunch by using a depth camera
* Determination of the shape and colour of the individual grapes
* Training a neural network that can recognize the quality of the individual grape based on its shape and color

Approach:

* Localisation of the individual grape on the grape bunch with the depth camera and the RANSAC algorithm
* The RANSAC algorithm uses shape detection to localise the individual grape and determine its shape
* Training a neural network that can recognise the quality of the individual grape based on its shape and colour

* Use neural networks, pretrained on ImageNet-Data [2] + transfer learning for face identification, requiring only a small amount of training samples
* Compare performances of different network architectures using a simple transfer learning architecture
* Optimize and evaluate the best performing architecture