Haozheng Lin

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Language:	German and English
Portfolio:	https://heizie.github.io
Github:	https://github.com/heizie/example_code

Work Experience

2018.10 – 2020.10 Student trainee with Bleenco GmbH

Main Task:

- Participated in the PPE wear monitoring project, contributed to development focuses
- Reproduced or modify classical Computer Vision (Deep-Learning-based) implementations and encapsulated them in a Docker container

Independent Project:

- Developed an annotation tool for easing workload via using mobile devices
- A based on classical Computer-Vision methods

Education

2018.09 – 2021.10 Master in Mechanical Engineering
(Control System and Computer Vision)
Technische Universität München

2014.09 – 2018.09 Bachelor in Mechanical Engineering
(Electromobility)
Technische Universität Bergakademie Freiberg

2010.09 – 2014.08 Bachelor in German Studies
Zengcheng South China Normal University

Project Experience

2021.04 – 2021.10 **Master's Thesis:**
Instance Segmentation for Application to Deformable Linear Objects (**Note: 1,3**)

- Developed anchor relevant modules for 4-dimensional RoI Transformer from scratch
- Building assumption models according to the failure cases and developed improvements connect to the scenario
- Designed and managed dataset; Fast implementation and failure analysis with multiple state-of-the-arts as the baseline

- Pytorch based Detectron 2 and MMDetection are used

2020.04 – 2020.11 **Semester Thesis:**

Image-based tracking of instruments of a laparoscopic manipulator system

- Developed a real-time U-Net-based for detecting the pose of the medical instruments
- Accelerated the support-algorithms
- Transformed the model to FP16-format with TensorRT, and loaded by C++ script
- Speed optimization: from 8.7 fps to 44 fps
- Accuracy improvement: 25% less pixel error and about 10% higher recall and precision
- Experimented sensor fusion for a 3D-reconstruction
- Tensorflow and TensorRT (C++) are used

2020.08 Lab course: Autonomous Applications (**Note: 1,7**)

- ROS-based project
- Trajectory following using PID and simulated Lidar data
- Crash prevention via normal speed to the obstacles

Skills

Programming: Python, C++, Matlab
Tensorflow, Pytorch, MMDetection, Detectron 2, TensorRt
Docker

Language: German (fluent in spoken and written)
English (fluent in spoken and written)
Chinese