HYOVIN KWAK

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EDUCATION

M.Sc. Datenwissenschaft, TU Dortmund, Germany *Oct 2018 - Present*
Current GPA: 2.35/5.0

B.A. Applied Statistics, Konkuk University, South Korea *Feb 2011 - Mar 2017*[1]
Overall GPA: 3.07/4.50 (ca. 2.2 im deutschen Notensystem)

EXPERIENCE

Deep Learning Intern, Pro2Future GmbH

Deep Learning Based Reconstruction for Linear Edifices *Oct 2021 - Present*

· Implementation of edge/corner points detection and open curve proposal of PIE-NET(Wang et al., 2020) based on PointNet(++)
· Setting up a deep learning pipeline based on detection and proposals to extract tunnel profile data e.g. orthogonal cross sections, center axis points approximation and its curve fitting of tunnel point cloud data
· Processing the ABC Dataset(Koch et al., 2019) to validate the pipeline
· Preparation for regular meetings with project partners
· (next) Implementation of curve decompositions and research publications

Object Detection *Jan 2021 - Mar 2021*

· Setting up pipelines to train/evaluate object detection models in the framework of Tensorflow2 Object Detection API and Detectron2 to detect objects in tunnel images

Student Research Assistant(SHK), Fak. Informatik, TU Dortmund

Software Development *Jun 2019 - Oct 2020*

· Translation of C++ based codes into Python to build/develop a prototype face recognition camera client, GUI and its server
· Implemention of VGG16 face recognition demo with a pre-trained model
· Implemention of Faster R-CNN face detection and recognition demo using a pre-trained weights in the framework of PyTorch
· GUI updates in the framework of PyQt

TECHNICAL SKILLS AND LANGUAGES

Programming Languages	Python, R, C/C++, Java
Frameworks	Tensorflow, PyTorch, Open3D, OpenCV
Tools and OS	Git, Linux, CloudCompare
Languages	Korean, German(C1), Englisch(C1)

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[1] Military obligation took place during this period from May 2012 to Feb 2014