






Haobin Tan

-  August 4, 1994
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Social Network

-  LinkedIn
-  Github

Languages

-  Chinese
-  English
-  German

Skills

- Python
- PyTorch
- Java
- JavaScript
- TypeScript
- C#
- ROS
- C

Education

- 04/2019 – **Master Studies Computer Science**
Currently *Karlsruhe Institute of Technology (KIT)*
Focus: Anthropomatics and Cognitive Systems, Robotics and Automation
- 09/2014 – **Bachelor Studies Computer Science**
04/2019 *Karlsruhe Institute of Technology (KIT)*
Focus: Robotics and Automation, software Engineering

Working Experience

- 06/2018 – **Working Student**
01/2020 *abas Software GmbH*
 - Development of cloud-based Document Management System (DMS) using Polymer, Vue.js, TypeScript, JavaScript, and Amazon Web Services (AWS)
 - Creation of automated tests with Jest and Cypress
 - Collaboration in an internationally distributed Scrum team

Practical Experience

- 04/2021 – **Walkable Path Discovery Utilizing Drones**
08/2021 *CV:HCI, KIT*
 - Development of “flying guide dog” prototype for visually impaired assistance using drone and semantic segmentation
 - Development of control algorithm to enable the drone to fly along the walkable path automatically and to interact with users via voice feedback
 - Introduction of Pedestrian and Vehicle Traffic Lights (PVTL) dataset for traffic lights recognition
- 11/2020 – **Hand Gesture Recognition**
03/2021 *Interactive Systems Lab (ISL), KIT*
 - Development of hand gesture recognition application
 - Building and training of neural networks using PyTorch
 - Dataset preprocessing and data augmentation using albumentations
 - Hyperparameter tuning using Ray-Tune
- 11/2020 – **Real-World Person Detection on Jetson GPU**
02/2021 *Vision and Fusion Laboratory, KIT*
 - Training of Single-Stage Detectors: YOLO, RetinaNet, SSD
 - Deployment of end-to-end person detection pipeline on Jetson Nano and Jetson AGX
 - Optimization using Nvidia Nsight
 - Model evaluation on Jetson platforms

Publications

- 2021 **Flying Guide Dog: Walkable Path Discovery for the Visually Impaired Utilizing Drones and Transformer-based Semantic Segmentation**
Haobin Tan, Chang Chen, Xinyu Luo, Jiaming Zhang, Constantin Seibold, Kailun Yang, Rainer Stiefelhagen
IEEE ROBIO 2021 (to appear)

Accomplishments

- 11/2020 – **TechQuartier “AiTalents 2020” Entrepreneur Education Program**
01/2021
- 12/2018 **Continental #Fiction2Science Hackathon**
Winner of “Industry 4.0 & AR”-Challenge