



Haobin Tan

- August 4, 1994
- Kreuzstr. 37, 76133, Karlsruhe, Germany
- +49 (0)176 67369652
- <https://haobin-tan.netlify.app>
- haobin.tan@outlook.com

Social Network

- LinkedIn
- Github

Languages

- Chinese ● ● ● ● ●
- English ● ● ● ● ●
- German ● ● ● ● ●

Skills

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

Working Experience

- 06/2018 – 01/2020 **Working Student**
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 – 08/2021 **Walkable Path Discovery Utilizing Drones**
CV: HCI, KIT
 - Development of “flying guide dog” prototype for visual 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 – 03/2021 **Hand Gesture Recognition**
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 – 02/2021 **Real-World Person Detection on Jetson GPU**
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

Education

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

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 Stiefelwagen
IEEE ROBIO 2021

Accomplishments

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