Haobin Tan

Kreuzstr. 37, 76133, Karlsruhe, Germany

(+49) 0176-67369652 | haobin.tan@outlook.com | https://haobin-tan.netlify.app | EckoTan0804 | haobin-tan

Education

Karlsruhe Institute of Technology (KIT) *Karlsruhe, Germany*
M.Sc. in Computer Science *Apr. 2019 - Currently*
- Focus: Anthropomatics and Cognitive Systems, Robotics and Automation
- Current grade: 1.7/1.0 (German Grading System)

Karlsruhe Institute of Technology (KIT) *Karlsruhe, Germany*
B.Sc. in Computer Science *Oct. 2014 - Apr. 2019*
- Focus: Robotics and Automation, Software Engineering

Work Experience

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

Practical Experience

KIT, CV:HCI Lab *Karlsruhe, Germany*
Walkable Path Discovery Utilizing Drones *Apr. 2021 - Aug. 2021*
- Development of "flying guide dog" prototype for visually impaired assistance using drone and semantic segmentation
- Design of drone self-control algorithm
- Creation of "Pedestrian and Vehicle Traffic Lights (PVTL)" dataset for traffic lights recognition

KIT, Interactive Systems Lab (ISL) *Karlsruhe, Germany*
Hand Gesture Recognition *Nov. 2020 - Mar. 2021*
- Development of hand gesture recognition application
- Building and training of neural networks using PyTorch
- Dataset preprocessing and data augmentation using Albumentations

KIT, Vision and Fusion Laboratory *Karlsruhe, Germany*
Real-World Person Detection on Jetson GPU *Nov. 2020 - Feb. 2021*
- Training of Single-Stage Detectors (YOLO, RetinaNet, SSD)
- Deployment of end-to-end person detection pipeline on Nvidia Jetson devices
- Performance optimization using Nvidia Nsight

Publications

**Flying Guide Dog: Walkable Path Discovery for the Visually Impaired Utilizing Drones
and Transformer-based Semantic Segmentation**
2021 IEEE International Conference on Robotics and Biomimetics *2021*
Haobin Tan, Chang Chen, Xinyu Luo, Jiaming Zhang, Constantin Seibold, Kailun Yang, Rainer Stiefelhagen

Accomplishments

2021	**"AiTalents 2020" Entrepreneur Education Program,** TechQuartier	*Remote*
2018	**Winner of "Industry 4.0 & AR"-Challenge,** Continental #Fiction2Science Hackathon	*Mainz, Germany*

Skills

Programming	Python, Java, JavaScript, TypeScript, C#, C, LaTex, Markdown, Linux
Artificial Intelligence	PyTorch, MMCV, NumPy, Pandas, Matplotlib, Plotly
Tools	VS Code, Git, Jupyter, Docker
Languages	Chinese (Native), Cantonese (Native), English (Proficient), German (Proficient)