

Haobin Tan

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Education

Karlsruhe Institute of Technology (KIT)

M.Sc. in Computer Science

- Focus: Artificial Intelligence
- Current grade: 1.7/1.0 (German Grading System)

Karlsruhe, Germany

Apr. 2019 - Currently

Karlsruhe Institute of Technology (KIT)

B.Sc. in Computer Science

- Focus: Robotics and Automation, Software Engineering

Karlsruhe, Germany

Oct. 2014 - Apr. 2019

Work Experience

abas Software GmbH

Working Student

- 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

Karlsruhe, Germany

Jun. 2018 - Jan. 2020

Practical Experience

KIT, CV:HCI Lab

Walkable Path Discovery Utilizing Drones

- 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

Karlsruhe, Germany

Apr. 2021 - Aug. 2021

KIT, Interactive Systems Lab (ISL)

Hand Gesture Recognition

- Development of hand gesture recognition application
- Building and training of neural networks using PyTorch
- Dataset preprocessing and data augmentation using Albumentations

Karlsruhe, Germany

Nov. 2020 - Mar. 2021

KIT, Lehrstuhl für Interaktive Echtzeitsysteme (IES)

Real-World Person Detection on Jetson GPU

- Training von einstufigen Detektoren (YOLO, RetinaNet, SSD)
- Einsatz einer End-to-End-Pipeline zur Personenerkennung auf Nvidia Jetson-Geräten
- Leistungsanalyse und -optimierung mit Nvidia Nsight

Karlsruhe

Nov. 2020 - Feb. 2021

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, MMLCV, NumPy, Pandas, Matplotlib, Plotly
Tools	VS Code, Git, Jupyter, Docker
Languages	Chinese (Native), Cantonese (Native), English (Proficient), German (Proficient)