# Chien Liu

Experienced machine learning engineer specialized in object detection and sensor fusion for autonomous driving

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## WORK EXPERIENCE

### Intern Data Scientist at Teraki, Berlin

April 2021 - Sep 2021

Camera and Radar Sensor Fusion on Automobile

- Improved efficiency of data loading by creating suitable pipelines
- Accelerated data preprocessing code 10x faster
- Created interactive data visualization tools
- Initiated end-to-end object detection on radar point cloud
- Designed benchmark for camera radar sensor fusion

### Research Assistant at Elsa Lab, Taiwan

Oct 2018 - June 2020

Computer Vision on Automobile

- Achieved state-of-the-art performance on KITTI benchmark with innovative deep learning based visual odometry approach
- Distributed training process among multiple GPUs which located on both local machines and cloud computing platform
- Conducted camera-LiDAR calibration on the automobile
- Researched on semantic segmentation and reinforcement learning

### Student Research Assistant at NTHU, Taiwan

Feb 2017 - June 2018

Plant Disease Detection in Orchid Factory

- Established image dataset which supported image argumentation
- Optimized CNN performance by leveraging transfer learning
- Integrated AI model, camera, and conveyor system, achieved 90% accuracy in orchid disease detection

## EDUCATION

### Current Master of Science: Computational Science and Engineering

Rostock Universität, Rostock, Germany 2020 - Current

### Bachelor of Science: Power Mechanical Engineering

National Tsing Hua University, Hsinchu, Taiwan  2014 - 2018

## AWARDS

**Intelligent Robots:**
NVIDIA - AI at the Edge Challenge
2nd Place

## PUBLICATIONS

CVPR 2020
Dynamic Attention-based Visual Odometry

ICML 2020
Toward Synergism in Macro Action Ensembles

NVIDIA's GPU Technology 2020
Sim-to-Real: Virtual Guidance for Robot Navigation

## SKILLS

**Programming Languages**
Python, C, C++, MATLAB, SQL

**Software Libraries**
Tensorflow, PyTorch, Scikit-learn, OpenCV, NumPy, Pandas, Matplotlib, Streamlit, pytest, OpenMP, Robotic Operating System (ROS), OpenFlow, Ryu, Mininet

**Embedded Platform**
NVIDIA Jetson, Arduino

**Cloud Computing Platform**
AWS, GCP

**DevOps**
Git, Bitbucket, Atlassian