

Ravi Kothari

Perception Engineer

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EDUCATION

10/2019 – 02/2022 **M.Sc. Automotive Engineering, RWTH Aachen, Germany**
Grade: 1,7
07/2013 – 05/2017 **B.Tech. Mechanical Engineering, IIT Kanpur, India**
Grade: 1,4

WORK EXPERIENCE

03/2022 – Present **Perception Engineer, AVL Software and Functions GmbH, Regensburg, Germany**

- **Knowledge Conformity of AI Models for Pedestrian Detection**
 - Collaborated to develop algorithms for inducing world knowledge in AI Model
 - Tested the module in closed loop simulation and with real world lidar data
- **Algorithm developer for AVL' Dynamic Ground Truth system**
 - Delivered 2D/3D perception module for offline perception
 - Integrated ML Ops for data selection, model tracking and evaluation
- **Text guided image domain adaptation with Vision Foundation Models**
 - Generated adverse weather dataset with diffusion models and GAN's
 - Benchmarked the performance with downstream detection tasks

06/2021 – 01/2022 **Master Thesis, e:fs TechHub GmbH, Ingolstadt, Germany**

- **Radar based Object Detection and Heading estimation using Cross Attention**
 - Implemented CNN Autoencoder to extract features from radar data
 - Novel Range-Angle-Doppler fusion channels with cross attention
 - Improved baseline mAP by 5% and reduced model size by 23%

12/2020 – 05/2021 **Internship, Mercedes Benz R&D, Stuttgart, Germany**

- **Evaluation of electric and hybrid vehicles with Matlab**
 - Developed a tool to analyze different hybrid drivetrain (P2/ BEV/ FCEV)
 - Modelled functional module for battery and e-drives

PUBLICATION

06/2023 **Radar data based Object Detection and Heading estimation using Cross Attention** [link](#)
- Oral Presentation: IEEE Intelligent Vehicle Symposium'23, Alaska
- Authors: Kothari, Ravi; Kariminezhad, Ali; Mayr, Christian; Zhang, Haoming

CERTIFICATION

Self-Driving Lab, Grade 1,0	IKA, Aachen	link
Dataset Analysis and Training with AutoML	Coursera	link
Docker and Kubernetes the Complete Guide	Udemy	link

RESPONSIBILITIES

07/2023 – Ongoing	GPU Cluster coordinator
07/2023 – Ongoing	Master thesis supervisor for Lidar NeRF domain adaptation
07/2017 – 08/2019	Blast furnace manager, Tata Steel, India
04/2014 – 05/2016	Technical Leader, BAJA SAE, IIT Kanpur motorsports team

SKILLS

Technical	<i>AI Framework</i> <i>ML Ops</i> <i>Inference</i> <i>Programming</i> <i>OS</i> <i>Middleware</i> <i>Version Control</i>	Pytorch, SciPy Mlflow, Docker, Kubernetes ONNX Runtime, TensorRT Python, C++ Linux ROS 1 Git, DVC
Languages	German English Hindi	Limited Working Proficiency B1 Proficient Native Proficiency



Regensburg, 20/04/2024