

# Sanket Shah

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## EDUCATION

### UNIVERSITY OF BONN

MASTERS IN COMPUTER SCIENCE  
2019-2022

### MUMBAI UNIVERSITY

BE IN COMPUTER ENGINEERING  
2014-2018

## SKILLS

### Development

- C++ • CUDA • OpenCV • PX4
- Thread Programming • ROS
- Python • Pytorch • ONNX

### Deployment

- TensorRT Quantization and Plugins
- NVIDIA Jetson • Snapdragon
- Docker • CI/CD Pipelines

### Concepts

- Deep Learning - Lidar, Camera and Radar based 3D Detection, Tracking, Velocity Estimation, Lane Segmentation.
- Computer Vision - 3D computer vision, Structure from Motion, Optical Flow, Point Cloud Processing
- Robotics - Sensor Fusion, SLAM, Motion Planning, Control Systems
- Sensor Setup - Lidar, Camera and Radar Calibration and Synchronization

## LINKS

Website:// <https://sanket-pixel.github.io/>

Github:// [sanket-pixel](#)

LinkedIn:// [sanket-shah-33a3a2135](#)

## COURSEWORK

### Graduate

Computer Vision(CVI)  
Machine Learning(CVII)  
Deep Learning  
Foundation of Graphics  
Cognitive Robotics  
Techniques of Self-Driving Cars  
Reinforcement Learning

### Undergraduate

Applied Mathematics  
Operating Systems  
Data Structures and Algorithms  
Databases and Distributed Databases  
Computer Networks  
Computer Architecture  
Artificial Intelligence

## RELEVANT EXPERIENCE

### SPLEENLAB GMBH | COMPUTER VISION ENGINEER

November 2023 - Present | Jena, Germany

- **Visual Odometry based GNNS Denied Localization** Deployed transformer based Keypoint matching model on NVIDIA Jetson Orin used for visual odometry of drones and autonomous ground vehicles.
- **Inference Library** Developed internal tool for inference in C++ and CUDA for generic ONNXRuntime, TensorRT, SNPE based inference. Used for monocular depth, keypoint matching, object detection, segmentation.
- **Deployment of Computer Vision models on Snapdragon** Deployed Single object tracker, multi-object tracker, keypoint matching, segmentation on VOXL2 drone with Snapdragon's QRB5165 chip using quantization and model pruning.

### MOTOR AI GMBH | COMPUTER VISION ENGINEER

November 2022 - November 2023 | Berlin, Germany

- **Camera-Lidar-Radar Fusion Model** Low-Level Latent Fusion Model for multi-view camera, lidars and radars to solve 3D Detection and Lane segmentation. Implemented TensorRT plugins for unsupported operation. CUDA accelerations for parallelizable operations. Used C++, CUDA, TensorRT, Pytorch.
- **Monocular 3D Detection** Developed a 3D Object Detection model on monocular images. Developed TensorRT engine and inference in C++/CUDA. Deployed on test vehicle. Achieved 3x inference speedup after quantization. Used C++, TensorRT, Pytorch.
- **Lidar based 3D Detection** Lidar only model for 3D detection using BEV projection. Developed TensorRT engine and inference in C++/CUDA. Achieved 2x inference speedup after quantization. Used C++, CUDA, PCL, Eigen, OpenCV, TensorRT, Pytorch.
- **German Traffic Sign Detection** at 100FPS. Deployed on test vehicle. Used C++, ROS, CUDA, Pytorch, TensorRT.

### ARTISENSE GMBH | COMPUTER VISION RESEARCHER

April 2022 - August 2022 | Munich, Germany

- **Monocular 3D reconstruction for autonomous vehicles** .Implementation of inhouse research paper.
- **Monocular depth estimation** model training on internal 4seasons dataset.
- **Moving object segmentation** mask model.
- Research Project in collaboration with **Technical University of Munich** under guidance of **Dr. Prof. Daniel Cremers**.
- Worked with Python using Pytorch, Numpy, Pandas and Open3D libraries.

### DINEXT GMBH | DATA SCIENTIST WERKSTUDENT

Mar 2021 - Mar 2022 | Saarland, Germany

- Lead the data science operations reporting to the CEO.
- Designed, Developed and Deployed (in production) more than 30 Machine Learning powered PowerBI dashboards with over 200 KPIs.

### SEPAGO GMBH | DATA SCIENTIST WERKSTUDENT

Feb 2020 - Feb 2021 | Cologne, Germany

- Worked on machine learning in cybersecurity using unsupervised learning.
- Worked with internal team to develop over 50 KPIs for detecting cyber-attacks.

### NETMONASTERY LTD | SOFTWARE DEVELOPMENT | DATA SCIENTIST

Sep 2018 - Sep 2019 | Mumbai, India

- Worked directly with CEO on machine learning models for cybersecurity.
- Integrated over 10 real-time ML models within their flagship product.
- Worked on data ingestion architecture with technologies like ElasticSearch.