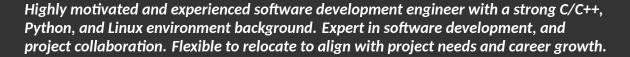
HARISH NATARAJAN RAVI

UNIVERSITÄT PADERBORN | PORSCHE ENGINEERING GMBH





CONTACT

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in Harish Natarajan Ravi

GitHub-harishnr93

SKILLS

Programming

С

C++

Python

MATLAB/Simulink

Operating Systems

Linux

Windows

Software, Tools & Platforms

ROS

Sensor Fusion

LiDARs & Cameras

ML/DL/CNN Git

Docker

CI/CD pipeline

AUTOSAR & ASPICE

AUTOSAK & ASPICE

Data handling/analysis

Languages

English Deutsch Native Speaker Intermediate

EDUCATION

Masters in Computer Engineering

Oct 2020 - Sep 2024

Q Universität Paderborn, Germany

B. Eng. in Electronics and

Communication Engineering

Sep 2011 - Jul 2015

♥ Visvesvaraya Technological University, India

CERTIFICATES

- Self-Driving Cars Specialization
- Machine Learning Specialization
- Neural Networks and Deep Learning
- Convolutional Neural Networks
- TensorFlow Developer Specialization
- Advanced Course in Embedded Systems

WORK EXPERIENCE

ADAS Research Intern and Master Thesis

Porsche Engineering GmbH

Sep 2023 - Sep 2024

♀ Mönsheim, Germany

- Designed and implemented parking map reconstruction pipeline using SLAM.
- Developed LiDAR-based relocalization modules for generated parking map.
- Employed loop closure for parking map trajectory utilizing sensor data.
- Implemented methods for supporting HMI parking functions.
- Enhanced the performance of parking assist systems.

System Development - Video Perception

Robert Bosch GmbH

Mar 2023 - Aug 2023

Stuttgart, Germany

- Performed comprehensive analysis for L3 camera-based parking assist systems.
- Conducted verification and validation ensuring compliance with specifications.
- Collaborated with teams to ensure system reliability and performance.

Student Research Assistant

Fraunhofer IEM

Sep 2021 - Feb 2023

Apr 2017 - Sep 2020

Paderborn, Germany

- Designed and implemented car-to-cloud demonstrator using simulators.
- Performed data extraction and analysis for telemetry data (SDV project).

Software Developer

Robert Bosch Engineering

And Business Solutions Pvt Ltd

Q Bengaluru, India

- Developed service layer functionalities for the DCM package.
- Implemented functions for OBD modules to aid Application layer.
- Responsible for debugging and testing of OBD functional modules.
- Experience in Functional Safety, Diagnostics, ADAS/AD, and ECU Protocols.
- Worked closely with cross-functional team for platform release activities.

Technical Analyst

IBM India Pvt Ltd

🛗 Jul 2015 - Apr 2017

Bengaluru, India

- Implemented test automation scripts and worked on functional tasks.
- Performed server node migrations and cluster booting tasks without impact.

THESES AND PROJECTS

Generation and Relocalization of Parking Maps

- Designed and implemented a parking map pipeline using SLAM algorithms.
- Reconstructed and Relocalized vehicle within the generated parking map.
- Evaluated the real-time performance of the pipeline in vehicle and simulation.
- Enhanced the performance of parking assist systems.

Disaster Response Robots

- Implemented LOAM pipeline to map and localise the environment.
- Enhanced the real-time performance of the pipeline using loop closure methods.
- Developed abstraction to plugin key points extraction and descriptor algorithms.

REFERENCES

- Prof. Dr. Erdal Kayacan <erdal.kayacan@upb.de>
- -Ing. Jing Gong <jing.gong@porsche-engineering.de>