

# Durga Prasad Babu Nasika

ROBOTICS & AI PRODUCT ARCHITECT · TECHNICAL LEAD

Hamburg, Germany   [linkedin.com/in/dpbn](https://www.linkedin.com/in/dpbn)   [github.com/dpbnasika](https://github.com/dpbnasika)   [youtube.com/@dprobotix](https://www.youtube.com/@dprobotix)

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## PROFESSIONAL SUMMARY

Robotics and AI product architect and technical lead with 12+ years of hands-on development building distributed, real-time systems that run at the edge and connect to the cloud. Architected MQTT-based IoT telemetry platforms for industrial vehicle fleets, multi-node sensor-data pipelines over lossy wireless links, and cloud data platforms for automotive OEMs. Combines architecture ownership with hands-on code in Rust, C/C++ and Python on embedded Linux (Yocto) and NVIDIA Jetson edge hardware, plus containerized CI/CD for edge deployment. Open-source contributor (Valkey-Search), startup founder experienced in build-versus-buy decisions, and mentor and customer-facing technical lead. Motivated to apply edge computing to sustainability outcomes such as reducing food loss and energy use.

## PROFESSIONAL EXPERIENCE

### Product / Software Architect Researcher – Distributed Perception Systems

06/2026 – Present

Evitado Technologies, Germany · part-time

- Architecting a distributed edge data and product platform for autonomous airport airside operations, connecting a mesh of LiDAR nodes over lossy wireless links.
- Designing transport for high-volume real-time wireless data: 22 MB raw point clouds delivered in under 100 ms across 100+ meters.
- Defining the fusion architecture for multi-node setups with dynamic extrinsic calibration, eliminating blind spots during aircraft pushback.

### Founder & Product / Software Architect

09/2018 – Present

Kaizen Robotics, Germany · part-time

- Own the end-to-end product, from requirements and architecture through code, tests, prototype validation and field reliability.
- Set technical direction across perception, navigation, sensor fusion and embedded hardware teams; ran design reviews and mentored engineers.
- Built optimized edge inference pipelines (TensorRT on NVIDIA Jetson), cutting compute load and raising real-time frame rates.
- Made build-versus-buy and open-source choices for the platform stack (ROS 2, Isaac ROS, Nav2) under startup budget constraints.
- Selected for NVIDIA Inception, German Accelerator, AI Startup Hub, Gitz Innovation and Hamburg Innovation programs.

### Technology Consultant & Manager

01/2022 – 04/2026

4ACES Tech GmbH, Germany

- Architected Azure-based data pipelines and workflow orchestration for VW/CARIAD, reducing manual operational effort by 90%.
- Led distributed engineering teams delivering ROS 2-based autonomous system prototypes for industrial customers; owned technical reviews and customer communication.
- Built diagnostic and simulation tooling (CANoe, CAPL) for automated Porsche ECU validation and testing.
- Acted as technical interface between customer data science teams, software engineers and enterprise IT infrastructure.

### Robotics Researcher (WiMi)

01/2025 – Present

Helmut Schmidt University, Hamburg · part-time

- Research on scalable, open-source dual-use robotics platforms with modular, plug-and-play hardware and software interfaces.

## Co-Founder & CTO

10/2020 – 04/2021

Ant Robotics GmbH, Germany

- Architected embedded, data and analytics pipelines for connected e-mobility products; defined the R&D roadmap, system design and IP strategy.
- Represented the technical architecture to investors during a €1.2M pre-seed round.

## Systems Developer

07/2018 – 08/2020

Cognizant Mobility GmbH, Germany

- Designed MQTT-based IoT telemetry and diagnostics pipelines for STILL autonomous forklift fleets, built in C/C++ on Yocto Linux.
- Cut diagnostics and fault-analysis time by 90% with automated data collection, real-time edge processing and intelligent alerting.

## Earlier roles

2013 – 2018

Embedded Software Developer – Bobz GmbH

2017 – 2018

Member Technical Staff – HCL

2015 – 2016

Programmer Analyst – Cognizant

2013 – 2015

Digital Marketing Analyst – Gofrugal

2013

## TECHNICAL SKILLS

|                       |                                                                                                              |
|-----------------------|--------------------------------------------------------------------------------------------------------------|
| Languages             | Rust, C/C++, Java, Python, SQL, CUDA                                                                         |
| Messaging & protocols | MQTT, DDS / ROS 2, CAN, TCP/UDP networking, Wireshark                                                        |
| Edge & embedded       | Embedded Linux (Yocto, Buildroot), NVIDIA Jetson (TX2, Xavier, Orin), sensor integration                     |
| Distributed & cloud   | Azure, AWS, Google Cloud, data pipelines, workflow orchestration, on-premises GPU clusters                   |
| CI/CD & testing       | Git, Docker, Jenkins, containerized deployment, MLOps pipelines, CANoe/CAPL simulation testing               |
| ML & robotics         | TensorRT, ONNX, PyTorch, TensorFlow, quantization, ROS/ROS 2, Isaac ROS, Nav2, SLAM, LiDAR/camera perception |

## EDUCATION

PhD Guest Researcher, Intelligent Robotics Systems – TUHH, Germany

2021 – Present

M.Sc. Mechatronics – TUHH, Germany

2016 – 2020

B.Tech Mechatronics – SASTRA University, India

2009 – 2013

## OPEN SOURCE, AWARDS & PUBLICATIONS

- Open-source contributor – Valkey-Search (Google & AWS)
- Best Master Thesis Award – BioThesis Germany (2021) · Innovation Award – UIF Program, HOOU (2020) · Merit Scholarships & Dean's List – SASTRA (2013)
- Nasika, D.P.B. et al., “Autonomous Weed Detection in Agricultural Environments: A Review,” *Agriculture*, 2021, 11(3), 222. doi:10.3390/agriculture11030222
- “Low-Cost Design Proposal of a Modular Telescopic Autonomous Agricultural Robot,” *Agronomy*. doi:10.3390/agronomy16080818
- Contributor, Fab City Hamburg Playbook (openHSU, 2025)

## LANGUAGES & WORK AUTHORIZATION

English (fluent) · German (professional working proficiency) · Telugu (native). Based in Hamburg; permanent resident, authorized to work in Germany/EU.