

Sai Bharadhwaj Matha

Male | 10.06.1999 | Single | INDIAN | Kothmaissling 37, 93413, Cham, Germany.

bharadhwaj2299@gmail.com | +49 155 108 59066 | github.com/Bharadhwajsaimatha

[linkedin.com/in/saibharadhwajmatha](https://www.linkedin.com/in/saibharadhwajmatha) | <https://bharadhwajsaimatha.github.io/portfolio/>

<https://loose0ends.wordpress.com/>

About

An ingenious engineer with two years of experience in embedded systems and power electronics for UAS and one year as a research assistant in 3D computer vision and deep learning. I completed my M.Eng in Artificial Intelligence, with my thesis on Semantic Occupancy Prediction for UAS. I am passionate about advancing my career in AI, computer vision, and intelligent robotics, striving to contribute to cutting-edge innovations.

Education

2022 – 2025 Cham, Germany	Master of Engineering in Artificial Intelligence for Smart Sensors and Actuators <i>Technische Hochschule Deggendorf.</i> GPA: 1.4 Thesis: Real-world Semantic Occupancy Prediction for Advanced Air Mobility.
2016 – 2020 Rourkela, India	Bachelor of Technology in Electrical Engineering <i>National Institute of Technology Rourkela.</i> CGPA : 8.72/10.0
2014 – 2016 Visakhapatnam, India	Higher Secondary Education <i>Board of Intermediate Education Andhra Pradesh.</i> Percentage: 98.4

Professional Experience

2024 – present Ingolstadt, Germany	Research Assistant <i>Fraunhofer IVI</i> <ul style="list-style-type: none">Working on research focused on semantic occupancy prediction for UAS.Expertise in computer vision, deep learning, and UAS avionics.
2023 – 2024 Ingolstadt, Germany	Internship <i>Fraunhofer IVI</i> <ul style="list-style-type: none">Developed a pipeline for 3D semantic point cloud generation.
2020 – 2022 Mumbai, India	Embedded Systems Engineer <i>Full-time, Ideaforge Technology Private Limited.</i> <ul style="list-style-type: none">Led the development of the propulsion system, ensuring reliable performance.Developed an FOC-based ESC for BLDC motors.Developed Li-ion and Li-Po battery pack charging system.
2019 – 2019 Pune, India	Internship <i>Hachimichi Technology Private Limited.</i> <ul style="list-style-type: none">Firmware for automation and heart-rate monitoring of a toilet seat.

Projects

03.2025 – present	Multi-Modal 3D Object Detection in Adverse Weather Conditions <ul style="list-style-type: none">Design and train a deep autoencoder for 2D feature extraction in adverse weather.Implemented early-fusion for multi-modal synthetic data generated in CARLA.
01.2025 – 02.2025	Novel Aerial View Synthesis using 3D Gaussian Splatting <ul style="list-style-type: none">Used 3D Gaussian Splatting to create realistic novel views from aerial drone images.Leveraging Metashape to output sparse reconstruction in COLMAP format.
06.2024 – 12.2024	Semantic Occupancy Prediction for Advanced Air Mobility <i>Master Thesis (expected release and submission: CVPR 2025)</i> <ul style="list-style-type: none">A novel benchmark semantic occupancy dataset for UAS, trained SOTA models, and working on a novel model architecture for aerial scenarios.Developed a large-scale dataset with monocular RGB + thermal aerial imagery.

- Designed a data-generation pipeline that integrates 3D reconstruction, pose estimation, semantic fusion, mesh generation, voxelization, and voxel densification.

2023 – 2023

6-DOF Autonomous Robot with Haptic Obstacle Sensing

- Autonomous 6-DOF robot with haptic feedback for obstacle detection.
- ROS-Gazebo simulation in Docker for modular deployment.

Skills

Python — Proficient	Machine Learning and Deep Learning — Proficient
Computer Vision — Proficient	PyTorch — Proficient
Generative AI — Competent	Agentic AI — Competent
Kubernetes, Git — Competent	Docker — Competent
C++ — Competent	SQL — Competent
Robot Operating System(ROS) — Competent	STM32, RTOS — Competent
Linux — Competent	Data Structures — Competent

Languages

Telugu — Native/Bilingual <i>Mother Tongue</i>	Hindi — Native/Bilingual <i>National Language</i>
English — Native/Bilingual <i>IELTS score: 8.0/9.0</i>	German — Conversational

Courses & Certificates

Big Data <i>Issued by Coursera</i>	Quantum Computing <i>Elective from THD</i>
MLOps (AWS): Deploying AI & ML Models <i>Issued by edX</i>	AI Agents <i>Issued by Hugging Face</i>

Organisations

2019 – 2020 Rourkela, India	VS Hall of Residence <i>Student elected representative</i>
2017 – 2020 Rourkela, India	Plugged_IN <i>Vice President</i>

Interests

- Cooking and blogging
- eFootball and gaming

References

Dr. Dmitrii Dobriborsci, *Professor*, Technische Hochschule Deggendorf
dmitrii.dobriborsci@th-deg.de

Henri Meess, *Manager*, Fraunhofer IVI
henri.meess@ivi.fraunhofer.de, +49 1725169897

Declaration

I affirm that all information provided is true and accurate to the best of my knowledge.

M. Sai Bhaskarhuja.

Kothmaissling, 26.05.2025