

# Kaustubh Vinodkumar Purohit

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**B.Sc. Electric Mobility and Renewable Energies**

Hochschule Ravensburg-Weingarten | 03/2023 – 09/2026



## WORK EXPERIENCE

**Working Student** 08/2025 – Present

**Siemens Energy Global GmbH & Co. KG, Nuremberg (Remote/Onsite)**

**Project:** *Unmanned Noise Measurement on Power Transformers and Reactors in the High-Voltage Test Field*

- Development and construction of the Sound-Buddy robot.
- 3D printing of special components.
- Learning how to simulate robots using ROS2.
- Python programming (Raspberry Pi) – basic skills.
- Research transformer components as required.
- Documentation and project coordination.
- EPLAN CAD software – project integration and planning.

**Contact:**

[Mr. Peter Herrmann \(SE GT TR LPT NBG TF\)](#)

[Mr. Johannes Geidl \(SE GT TR LPT NBG TF\)](#)

[Mr. Michael Werner \(SE GT TR LPT NBG TF\)](#)

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**Project Intern**

03/2025 – 08/2025

**Siemens Energy Global GmbH & Co. KG, Nuremberg**

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**Working Student** 12/2023 – 02/2025

**Zendar GmbH, Lindau Reutin**

- Radar calibration.
- 3D printing (QIDI).
- Programming in Python and C/C++.
- Assembly of test vehicles (ZenVan).
- Vehicle testing.

**Contact:**

[Mr. Rafael Kracke \(Senior Engineering Manager\)](#)

[Mr. Vinayak Nagpal \(Chief Executive Officer & Co-Founder\)](#)

## PROJECTS

### Bachelor's Thesis

04/2026 – 10/2026

*Design and Packaging Analysis of a 48 V Battery System for Electric Drivetrain Applications*

- CAD-based development of a 48 V lithium-ion battery system (max. 60 V) for electric drivetrain applications using SolidWorks.
  - Cell comparison (21700 / 18650 / prismatic) and packaging optimization considering installation space, weight, thermal management, safety, and cost.
  - Electrical design of the battery (series/parallel connections, voltages, capacity, energy, currents) and development of mechanical fixing and safety concepts.
  - Planning the integration of the BMS (Battery Management System) and the relay.
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### Numerical Integration Project

03/2026 – 06/2026

*Study of two integration techniques: the Trapezoidal Rule and the Monte Carlo Method.*

- Programming in three languages: Python, C, and MATLAB.
  - Analysis of generated diagrams with detailed explanations.
  - Implementation of two different functions, each producing different results.
  - Comparison of results to determine which solution is more precise and convincing.
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### Scientific Research Paper

06/2023 – 08/2024

*Can microcontrollers be used for CO<sub>2</sub>-neutral procurement, use, and disposal?*

- Analysis of the CO<sub>2</sub> footprint of microcontrollers across their entire lifecycle.
  - Public survey conducted with 120–130 participants.
  - Data evaluation, comparison with scientific literature, and preparation of a technical report.
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### Rover to Mars Team (CIRC 2024)

06/2023 – 06/2024

- First team member in the areas of mechanics and project management.
  - Contributed to concept development of the rover chassis and battery integration.
  - Supported project setup and team organization.
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## SKILLS

- CAD (SolidWorks, AutoCAD)
- MATLAB / Simulink
- Python (basic knowledge)
- C / C++
- 3D Printing
- Automotive Engineering
- Research & Development
- Battery Cell Design, Research & Development
- EPLAN Electrical CAD Software

## LANGUAGES

- German – Good working knowledge
- English – Fluent
- Hindi – Native language
- Gujarati – Native language

## CERTIFICATES

- Eurasia German Language Certificate (B2) | 02/2022 – 05/2022
- Goethe German Language Certificate (B1)
- IELTS English Language Certificate
- Dassault Systèmes SolidWorks (Professional & Associate) | 10/2020 – 07/2021
- Autodesk AutoCAD / CAM (Professional & Associate) | 09/2020 – 12/2020