RUSHIK SAI JAKKA

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Education

University of Bremen   **April. 2024 – Present**
Master of Science in Control Microsystems and Microelectronics   *Bremen, Bremen Germany*

VNR Vignana Jyothi Institute of Engineering and Technology   **Aug. 2019 – May 2023**
Bachelor of Technology in Electronics and Instrumentation Engineering   *Hyderabad, Telangana, India*

Relevant Coursework

- Control systems
- Electronic circuits
- Automation
- Telemedicine
- Virtual instrumentation
- Nano-Technology
- IoT
- Electronic measurements
- Microprocessors
- Sensor and measurement
- Design thinking
- Robotics applications

Experience

ASTRA e.V.   **Sept. 2024 – April 2025**
Avoinics   *Bremen, Germany*

- Development of electronics and flight computer
- Building the flight computer and PCDU (Power control and distribution unit) for the rocket
- Building the control and data acquisition system for the pressure test and the propulsion test. The data aquistion setup is used to measure any desired data using sensors and stored on a SD-Card for later analysis. The control setup is used to control the valves and igniters involved in the tests

Projects

Development of a modular wheelchair for aid people with conditions leading to gradual multiple organ failure | *Python, Arduino*   **Jan. 2023 – May 2023**

- Providing an affordable, adaptable, and replaceable solution for patients with disease conditions like ALS and GBS, allowing easy upgradation and control stages
- The final prototype was a modular wheelchair, combining electronic sensors and mechanically flexible components
- Using a Raspberry Pi and Python libraries, a speech-to-text operation was developed to allow patients to operate a wheelchair with voice commands

Robotic Programming with ROS (Elective Coursework) | *Ubuntu, ROS 2, RViz, Python*   **March 2025 – Present**

- Engaged in a practical robotics course under Faculty 03 at the University of Bremen, focusing on ROS 2-based programming and navigation.
- Set up and configured Ubuntu environment via virtual machine on Apple M2 chip.
- Worked with TurtleSim for simulation, visualization, and control using RViz; implemented path planning and predator-prey turtle behaviors.
- Collaborating in a 4-member team project on a 3-level mobile robot, handling advanced navigation and multi-layered task logic.

Technical Skills

Languages: Python, C, HTML/CSS, MATLAB, Ladder logic
Technical softwares: COMSOL multiphysics, Multisim, MATLAB, LabVIEW, AutoCAD, MS office, LaTeX
Technologies: Process control automation with PLC, IoT

Leadership / Extracurricular

Chair IEEE VNRVJIET SB   **Aug. 2022 – May 2023**
Core Team   *VNRVJIET*

- Conducted Technical events like webinars, coding contest etc.
- Managed volunteers of 200 members and ran weekly meetings to oversee progress in essential parts of the chapter.
- Conducted international conference ICMACC'22, which includes many technical aspects like research paper presentation over the topics of of microelectronics,automation, communication, computing

Languages

English (B2): ●●●●○○
German (A2): ●●○○○○ **Hindi (A2):** ●●○○○○

Hobbies

Playing badminton, Playing guitar
Graphic design, Reading novels