

TEJASHWINI N M

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SUMMARY

Electronics and Communication Engineering student with a strong interest in Software Development, Data Analytics, and emerging technologies. Skilled in Java, SQL, and MySQL, with hands-on experience in project development, database management, and hardware-software integration. Experienced in building solutions using Embedded Systems, IoT, ESP32, ESP-NOW, and RFID technologies. A hackathon award winner with strong analytical and problem-solving abilities, eager to contribute to innovative software and data-driven solutions.

EDUCATION

B.E. in Electronics and Communication Engineering	2022 – 2026
Vidya Vikas Institute of Engineering & Technology, Mysore	CGPA: 8.99 / 10.0
12th Standard	2022
Govt. PU College, Bannur	Percentage: 90.83%
10th Standard	2020
Govt. High School, Neralekere	Percentage: 91.36%

SKILLS

Programming: Java(OOP Concepts, Exception Handling, Collections Framework, JDBC), C

Frontend Technologies: HTML, CSS

Database Technologies: MySQL

Embedded Systems & IoT: ESP32, ESP-NOW, RFID, Arduino, Digital Electronics, I2C, Basic KiCad Workflow

Tools & Software: Arduino IDE, Proteus, TinkerCad, KiCad, VS Code, Git, GitHub, Eclipse, MS Office

Soft Skills: Communication, Problem Solving, Team Collaboration, Public Speaking, Adaptability

EXPERIENCE

Software Development Intern | TAP Academy Feb 2026 – Present

- Developing software applications using Java, JDBC, and MySQL, with hands-on experience in database connectivity and CRUD operations.
- Designing and implementing responsive web interfaces using HTML and CSS, while strengthening frontend development fundamentals.
- Applying Object-Oriented Programming (OOP) concepts, SQL queries, debugging, and problem-solving skills through practical assignments and project-based learning.

AI Virtual Intern | Edunet Foundation, AICTE & Shell India Aug 2025 – Sep 2025

- Worked on an AI-based fertilizer recommendation system that processes soil and environmental data to suggest optimal fertilizer types and quantities for smart farming applications.
- Gained practical exposure to how AI-driven recommendation systems function, including data input handling, output interpretation, and real-world agricultural use cases.

PROJECTS

JRE Memory Visualizer Apr 2026 – May 2026

- Built a browser-based tool that accepts Java code as input and simulates JVM memory allocation step-by-step across Stack, Heap, Metaspace, and Code Segment regions with SVG-based reference arrows connecting Stack variables to Heap objects.
- Integrated Anthropic Claude API using prompt engineering to parse Java code and generate JSON-formatted step-by-step memory state frames including stack frames, heap objects, and reference mappings.

Smart Wheel Misalignment and Tire Pressure Detection System Feb 2025 – Dec 2025

- Developed a portable wireless wheel condition detection system using ESP32 and ESP32-C3 microcontrollers.
- Integrated an ADXL345 accelerometer, AS5600 magnetic encoder, and MPX5700AP pressure sensor for wheel alignment and tire pressure monitoring.
- Implemented ESP-NOW communication for wireless sensor data transmission and real-time condition display on an OLED screen.

Two-Way Communicating Speech-Generating Device Using RFID Feb 2025 – May 2025

- Developed a low-cost assistive communication device using ESP32 for individuals with speech impairment.
- Integrated RFID cards as input triggers mapped to pre-recorded audio outputs for two-way communication.
- Tested the system for portability and communication functionality in educational and home-use environments.

CERTIFICATIONS

Python Fundamentals (Infosys Springboard) | CMOS Digital VLSI Design (NPTEL) | VLSI for Beginners (NIELIT Calicut) | Embedded Systems for Beginners (NIELIT Calicut)

ACHIEVEMENTS

- Secured **2nd Runner-Up** at AIISH Hackathon on Assistive Technology 2025 (AIISH-HAT 25) for developing a two-way RFID-based assistive communication device for individuals with speech impairment.