

RITHIKHA S

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🌐 <https://github.com/roboticengguseratvit>

Education

Pursuing Bachelor of Technology in Artificial Intelligence and Robotics
Vellore Institute of Technology, Chennai

Aug 2023 – Aug 2027
Tamil Nadu

High Secondary – 78.8%

Delhi Public School Bangalore East

Jun 2011 – May 2023
Bangalore

Relevant Coursework

- | | | |
|---------------------------|---------------------|--------------------|
| • Artificial Intelligence | • Web Development | • Arduino |
| • Database Management | • Robot Programming | • Machine Learning |

Certificates

AWS APAC Solutions Architecture virtual experience program on Forage - September 2025

- Designed and simple and scalable hosting architecture based on Elastic Beanstalk for a client experiencing significant growth and slow response times.
- Described my proposed architecture in plain language ensuring my client understood how it works and how costs will be calculated for it.

Projects

Manipulation of Robotic Arm | ROS1, Python, Arduino IDE

Mar 2025 – Apr 2025

- Controlled a DIY robotic arm by integrating ROS1 nodes with Arduino, enabling joint angle manipulation via ROS topics and serial communication.
- Developed Python scripts for publishing/subscribing arm control commands, tested motion planning, and achieved real-time manipulation through ROS workspace integration.

Quiz based To Do List Website for Students | HTML, CSS, Javascript

Feb 2025 – May 2025

- Designed a web application where students can manage tasks with a gamified quiz-based system to improve engagement and productivity.
- Implemented responsive UI with task management, quiz prompts, and progress tracking using vanilla JavaScript.

Braille to Text Transcription | Arduino IDE

Feb 2025 – May 2025

- **Text-to-Braille:** Designed a glove with six vibrator motors that converts user-input text into Braille patterns, allowing visually impaired users to feel the characters in real time.
- **Braille-to-Text:** Built a button-based Braille input device that translates Braille characters into text, displaying results on an LCD screen for accessibility.

CURA – AI Powered Personal Journal | HTML, CSS, Javascript, Flask, OpenAI, Whisper, JSON Models

Aug 2025 – Nov 2025

- Developed a web-based personal wellness application that enables users to record journal entries through text or voice and analyze emotions using sentiment detection models.
- Integrated Jotform chatbot for guided emotional reflection and OpenAI Whisper API for speech-to-text transcription.

Technical Skills

Languages: Java, Python, C, C++

AI/ML: OpenCV, YOLO, Numpy, Pandas

Tools & IDE: Google Colab, Git, Arduino IDE, VS Code

Web Development: HTML, CSS, JavaScript, ReactJS

Embedded Systems: Arduino, (learning Raspberry Pi and Pixhawk)

Database: MySQL

Other: ROS and Linux Basics

Extracurricular

Technocrats Robotics

Jun 2025 – Nov 2025

- Member of programming team of Technocrats Robotics for Robocon and Rover competitions.

Hobbies

- Reading
- Listening Songs
- Dancing