Robotics Society NITH - Information Document

1. Introduction

This document provides detailed information about the society, including its history, leadership, ongoing projects and events. This information will be used to train our chatbot, making it an effective tool for both members and visitors.

2. Society Overview

2.1. Founding Date

Founded: 2016

2.2. Mission and Vision

Mission: Build and sustain a culture to be self-reliant to accomplish our vision, by emphasizing the development of individual quality.

Vision: To be a luminary of the Indian society in the field of Robotics.

2.3. History

Brief History: RoboSoc NITH was co-founded by Kashish Verma and the late Lamyanba Heisnam. It aims to develop a strong culture of robotics within the NIT Hamirpur community.

4. Board Members and Their Roles

4.1. 2024-2025

Role	Member Name
President	Aakash Tiwari
Vice President	Neha joshi
General Secretary	Milind Gupta

Joint General Secretary	Varun Jain
Treasurer	Sarika Lakhotia
Technical Head (Programming)	Akhil Sharma
Technical Head (Mechanical)	Urvashi Lamba
Technical Head (Electronics)	Vanshika Gyanchandani

5. Executive Members

5.1. 2024-2025 Coordinator

Name	Roll Number
Putul Singh	22BME080
Akhil Sharma	22BEE015
Ritwiz Singh	22BCS047
Avisheet Srivastava	22DCS005
Yashita Arya	22BCS120
Purushottam Singh	22BME078
Nitya Pal	22BCH036
Kshitij Priyank	22BME048
Namrata Kaushal	22BCH034

5.2. 2024-2025 Executives

Name	Roll Number
Ashish Ranjan	23BME025
Kartik Sharma	23BCH032
Jai Krishan Sharma	23BCS041
Manya Singh Lalhall	23BCS060
Prakhar Pandey	23BCS077
Punitha Narasegowda	23BCS081
Rishabh Sharma	23BCS087
Rishabh Sharma	23BCS088
Nimish Saxena	23BEC068
Vaibhav Shukla	23BEE114
Areen Sharma	23BCE025
Chirayu Pandey	23BME033
Disha Sachan	23BME053
Khushi Pandey	23BME059
Robin Rawat	23BMS029
Sarthak Katiyar	23DCS024

5.3. 2024-2025 Volunteers

Name	Roll Number
Atul Koundal	24BCS031
Peeush Chauhan	24BCE054
Tanishka Sharma	24BCE081

Shubham Pathak	24BEC100
Shranya Thakur	24BEC098
Pallavi Pal	24BME060
Sakshi Kaushal	24BME083
Alvin Saini	24BME010
Ayush Kumar Sharma	24BEE028
Akansha	24BME007
Shreya Thakur	24BCE074
Himanshu Punpher	24BEC050
Garv Kapoor	24BEC040
Vaibhav Pandey	24BCH071
Somesh Gupta	24BPH046
Saumya Jaiswal	24BCS102
Ravi Kumar Verma	24BCS096
Vinay	24BCS121
Yashwin Sharma	24BCE088
Vyom Pant	24BCS123
Priyanshu Kaushal	24BEE074
Vanshika Sharma	24BCS119
Sambhav Agarwal	24BEE085
Kunz Sharma	24BMA021
Parth Thakur	24BCS077
Shashwat Singh	24BCS105

6. Projects

6.1. Robotic Arm

Description: A project aimed at designing a functional robotic arm with precise control and multiple degrees of freedom.
Status: In Progress

6.2. Autonomous Underwater Vehicle (AUV)

Description: Developing an AUV for underwater exploration and data collection, with a focus on navigation and obstacle avoidance.
Status: In Progress

6.3. Line Following Bot

Description: Creating a robot capable of following a predefined path using sensors, focusing on real-time data processing and control systems.
Status: Completed

6.4. Gesture-Controlled Bot

Description: A robot controlled by hand gestures. This project focuses on integrating sensors and machine learning algorithms to interpret hand movements and translate them into robotic actions.
Status: Completed

6.6. 3D Scanner

Description: Development of an affordable, high-resolution 3D scanner for personal use. It uses line lasers and 3D triangulation to generate a point cloud for creating 3D models. The scanner operates on a Raspberry Pi with onboard software, requiring no additional installations.
Status: In Progress

6.7. Driverless Car

Description: A prototype driverless car that detects roads, follows paths, and recognizes traffic signals using Raspberry Pi, camera, and ultrasonic sensors. The project focuses on object detection and neural network training using OpenCV.
Status: In Progress

6.8. Teleoperation Using Leap Motion

Description: Developing a system to replicate hand gestures for teleoperation using Leap Motion. The project includes a robotic hand controlled via a microcontroller, translating gestures into precise movements.
Status: In Progress

6.9. Vision-Based Pick and Place Robotic Arm

Description: Implementing a vision system on a robotic arm to recognize objects and perform pick-and-place operations using OpenCV. The system communicates object positions to the arm for execution.
Status: In Progress

7. Events

7.1. Robosoc Workshop

Title: Robosoc Workshop
Date: []
Description: This event was organized for first-year students to introduce them to Robotics and the Robotics Society. More than 500 students attended the workshop.
Outcome: Approximately 300 students came for the interview for the Robotics Society.