

ACADEMICDETAILS			
B.E. (Hons.) Mechanical Engineering	BITS Pilani - Goa Campus	7.83 CGPA	2024
Maharashtra State Board of Secondary and Higher Secondary Education (MSBSHSE)(CLASS XII)	ADITYAENGLISHMEDIUMSCHOOLAND JUNIORCOLLEGE, BANER, PUNE	84.92 %	2020
CBSE (CLASS X)	D.A.V PUBLIC SCHOOL AUNDH PUNE	89.6 %	2018
SUBJECTS			
Electives	Artificial Intelligence for Robotics, Discrete Mathematics, Computer Aided Design, Vibration and Control, Quality Control And Reliability, Business Communication, Cognitive Neuroscience, Engineering Optimization, Manufacturing Management, Computer Programming, Engineering Mathematics		
Technical Proficiency	MATLAB, C#, Computer Vision, C++ Language, Blender, Unity3D, C Programming, PowerPoint, Digital Image Processing, Machine Learning, Python, Excel		
WORK EXPERIENCE			
Perceptyne Technologies Robotics Intern	<p><b>Tele-operation of robotic arm</b> (Python, openCV, NumPy, pyKinect, scipy) Developed an application that used the Azure Kinect RGB-Depth Camera to detect arm joints, then transformed the data for real-time 4 DOF arm motion simulation in CoppeliaSim (V-REP). Vector algebra and advanced robotic concepts were used to estimate elbow and shoulder joint angles. Real-time data was scraped for imitation training through Machine Learning.</p> <p><b>Tactile Sensor Visualization</b> (Python, Matplotlib, openCV) Developed a Python app to assess the impact on robotic hand tactile sensors, visually represented in Matplotlib. Integrated force sensors on a robotic hand in CoppeliaSim, studying their impact during object grasping. Real-time estimates were relayed to Matplotlib for an interactive demonstration of proprietary technology. Applied advanced image filtering to enhance visual output and structured data for efficient imitation training.</p> <p><b>Path Planning experimentation</b> (Python, OMPL) Explored simulators and path planning algorithms in Linux environments, including MoveIT, Nvidia ISAAC SIM, and DRAKE. Experiments were carried out in order to develop a feasible solution for robotic arm motion planning, manipulation, and object grabbing.</p>		Jul 2023 - Dec 2023
PROJECTS			
Study Oriented Project- Genetic Algorithms	Researched Multi-Objective Decision Making (MODM) with an emphasis on Binary and Real Genetic Algorithms, developing and improving them in Matlab.		Jan 2023 - May 2023
Emotion Recognition Model	Implemented Deep Learning to improve a Facial Emotion Recognition (FER) model that was trained and validated using a 30,000-image dataset. Preprocessing and ReLU activation were used to increase accuracy. On fresh data, the model performed satisfactorily in terms of prediction. Numpy, Pandas, Keras, and Matplotlib were employed as libraries.		Oct 2022 - Dec 2022
POSITIONS OF RESPONSIBILITY			
Corporate Affairs and Funding Director SEDS India	Promoted the extension of SEDS (Students for the Exploration and Development of Space) in India, championing the onboarding of a new chapter and serving as the primary point of contact with all chapters, their university faculty/administration. Effectively dealt with interactions between SEDS India and its 12 university chapters across the country, scheduling monthly inter-chapter meetings and actively seeking possible sponsors to arrange effective countrywide SEDS outreach events.		Aug 2022 - Aug 2023
MECHANICAL SUBSYSTEM LEAD PROJECT CANSAT-Team Rayquaza	<ul style="list-style-type: none"><li>Guided and qualified a team through the Preliminary Design Review (PDR) and Critical Design Review (CDR) rounds of India's inaugural university-level CANSAT competition. Designed and built a working nanosatellite for collecting atmospheric data during descent, complete with a dual parachute system.</li><li>Developed a 3D printed container that is resistant to 30Gs of stress and has a hexagonal shape for weight reduction.</li><li>Worked on a 2-axis Flywheel-Motor Gyroscopic stabilization method that was introduced to maintain a stable upright posture during descent, preventing chaotic trajectories.</li><li>Pioneered parachute aerodynamics research, developing a hinge-based deployment system for regulated descent velocity in two phases.</li></ul>		May 2022 - Aug 2023
BASIC INFORMATION			
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