Aarya Mourya

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Education

Shree L.R. Tiwari College of Engineering (SLRTCE), Mumbai **Dec 2021 – May 2025**
Bachelor of Engineering - Electronics and Computer Science *7.08 CGPA*

SVP Junior College, Maharashtra **June 2020 – May 2021**
Higher Secondary Certificate (HSC) *71.17%*

Technical Skills

Programming Languages: Python, C++, MATLAB, Bash, LaTeX
Libraries/Frameworks: ROS2, Rviz2, Gazebo, MoveIt!, OpenCV, Scikit-Learn, NumPy, Matplotlib
Environment/Tools: Linux, Git, GitHub, Fusion-360, AWS Cloud Foundation, Canva, MS Office (Word, Excel, PPT)
Soft Skills: Leadership, Public Speaking, Public Relations, Team Work
Languages: English, Hindi

Experience

Women in Robotics - Non-Profit Organization **Sep 2024 – Present**
Volunteer Member *Remote*
- Conducted design sessions and workshops to empower women in the robotics industry.
- Networked with professionals and collaborators to enhance outreach and community engagement.

Department of Computer Engineering - SLRTCE **June 2024 – July 2024**
*Linux Internship Trainee - Mentored by **Prof. Rajesh Gaikwad*** *Mumbai (On-site)*
- Administered Linux systems, managing users, file permissions, and networking tasks.
- Enhanced system security through IPtables firewalls and SSH key authentication.

The Innovation Story - STEM Innovators **Oct 2023 – Mar 2024**
Internship *Dadar (Hybrid)*
- Created designs and collaborated on engaging visuals for branding and marketing.
- Designed T-shirts for the FIRST Robotics Competition.

Department of Computer Engineering - SLRTCE **Mar 2023 – Apr 2023**
*Cybersecurity Internship Trainee - Mentored by **Prof. Rajesh Gaikwad.*** *Mumbai (On-site)*
- Managed system administration tasks, automated operations with Bash scripts, and configured IPtables firewalls.
- Secured systems with SSH key-based authentication.

E-Cell - SLRTCE **Jul 2022 – Jun 2023**
Graphic Lead & Graphic Design Coordinator *Mumbai (On-site)*
- Coordinated graphic design projects and led event preparations for entrepreneurship programs.
- Played a key role in E-Summit 2023, supporting competitions and collaborating with teammates.

Projects

Intelligent AMR with Integrated Visual and Sensor-Based Navigation | *July, 2024 - Present* **(GitHub Link)**
- Designed a 2-Wheel Differential Drive AMR with Arduino UNO and Raspberry Pi, integrating sensors (LiDAR, IMU, Encoders, Camera) for advanced perception and navigation.
- **Key functionalities of the robot:** Teleoperation, Autonomous Navigation, SLAM, Object Detection, Classification, Path Planning, Obstacle Avoidance, Gesture Control.

Autism Spectrum Disorder (ASD) Prediction Using Machine Learning | *June, 2024 - July, 2024* **(GitHub Link)**
- Developed a machine learning model for predicting ASD, utilizing data from surveys and applying Random Forest Classifier.
- Evaluated model performance using F1 score, precision, recall, and accuracy, and created a GUI for result visualization.

Sign Language Recognition for Deaf and Mute People | *April, 2023 - July, 2024* **(GitHub Link)**
- Developed an ASL recognition system using Linux, Python, OpenCV, and Google's Mediapipe library for hand gesture detection, achieving high accuracy with a Random Forest Classifier for gesture recognition.
- Using Matplotlib for data visualization and NumPy for efficient numerical computations, ensuring fast real-time processing for the recognition system.

Autonomous Maze Solving Robot | *August, 2022 - April, 2023* **(GitHub Link)**
- Built a 2-Wheel Differential Drive autonomous robot using Arduino UNO and sensors to navigate mazes with collision - avoidance algorithms and servo motor control.
- Designed CAD models for the robot and maze using Shapr3D, integrated hardware components including an HC-SR04 ultrasonic sensor, and created detailed electronic schematics with TinkerCAD Circuits.