



Avi Raj

Bachelor of Technology
Automation and Robotics
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EDUCATION

- **Bachelor of Technology in Automation and Robotics** 2021-25
UNIVERSITY SCHOOL OF AUTOMATION AND ROBOTICS Surajmal Vihar New Delhi CGPA: 8.29
- **Intermediate** Year: 2020
ST JOHNS ACADEMY Daulatpur Chandi Vaishali Bihar Percentage: 86.80

EXPERIENCE

- **Computer Vision Intern** Aug 2023 - Sept 2024
UDIP Technologies Pvt. Ltd. Offline
 - Developed computer vision algorithms for visual data analysis and collaborated on optimizing vision systems for various applications.
 - Trained YOLOv7 models with 10,000+ images, achieving 95% success in object detection using deep learning techniques.
 - Improved computer vision models using deep learning and validated smart badge performance in real-world trials, achieving 63% success in object detection.
 - Learned basics of Network & Cloud Security.
- **Automation and CNC Training** AUG 2023
COE SIEMENS, PEC Chandigarh Offline
 - Developed expertise in SIMATIC Controllers (PLCs with HMI) for industrial automation.
 - Gained hands-on experience programming and configuring SIMATIC S7-1500 PLCs.
 - Operated and configured Siemens 808D Turning and Milling Kits for CNC machining.
 - Applied CNC machining principles to practical scenarios, emphasizing safety and industry standards.

PERSONAL PROJECTS

- **PhotoMingle** July - Sept 2024
A web application which allow users to exchange their photos of event.
 - Developed a web application for exchanging event photos using computer vision algorithms.
 - Implemented event creation, invitations, and photo downloads via facial recognition.
 - Designed user-friendly interfaces for seamless event and photo management.
 - Conducted extensive testing to ensure reliability and a smooth user experience.
 - Technology Used: ReactJs, HTML, TailwindCSS, Django, MongoDB, AWS Rekognition, SendGrid
- **CollegeBrusters web app** Apr - June 2023
Web app that offers real-time access to class schedules, attendance records, and marks.
 - Developed a web application offering real-time access to class schedules, attendance records, and marks.
 - Implemented secure user authentication and authorization to protect sensitive data.
 - Integrated APIs to fetch and update real-time academic information.
 - Technology Used : Django, MongoDB, TailwindCSS, HTML, API.
- **Facial Recognition Systems** July - Aug 2022
A facial authentication system implemented using OpenCV
 - Developed a facial authentication system using OpenCV.
 - Implemented live detection techniques to enhance security and prevent spoofing attacks.
 - Technology Used: OpenCV, Face_recognition, ReactJs, Bootstrap.

TECHNICAL SKILLS AND INTERESTS

Languages: C/C++, Python, Javascript, HTML+CSS

Libraries : OpenCv, YOLOv7, ReactJs

Web Dev Tools: Nodejs, VScode, Git, Github, IDx, Neovim

Frameworks: Django, ReactJs

Cloud/Databases: MongoDB, Relational Database(mysql)

Relevant Coursework: Data Structures & OOPS, Fundamental of Automation, Introduction to Robotics, Linear Algebra, Advanced Robotics, Robotics, Control Theory, Database Management System, Software Engineering.

Areas of Interest: Robotics, UAVs, Computer Vision, SLAM, ROS.

POSITIONS OF RESPONSIBILITY

- **Core Lead Karu Yantra Robotics Club** Aug 2023 - July 2024
 - Led a team of 15 members as the Core Team Lead of Karu Yantra, the Robotics Society at my college.