

Avi Raj

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Education

University School of Automation and Robotics, New Delhi

Nov 2021 - July 2025

B.Tech in Automation and Robotics

CGPA:8.56/10

Relevant Coursework: Object-Oriented Programming, Data Structures, Fundamentals of Automation, Introduction to Robotics, Advanced Robotics, Linear Algebra, Cobotics, Control Theory, Database Management System, Software Engineering.

Experience

UDIP TECHNOLOGIES PVT. LTD. , New Delhi

Aug 2023 - Present

Computer Vision Intern

- 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.
- **Technologies Used:** Python, OpenCV, YOLOv7, Django.

Project Work

• **PhotoMingle:**

(ongoing)

- Developing a web application for exchanging event photos using computer vision algorithms.
- Implementing event creation, invitations, and photo downloads via facial recognition.
- Designing user-friendly interfaces for seamless event and photo management.
- Conducting extensive testing to ensure reliability and a smooth user experience.
- Technology Used:** Node.js, MongoDB, React.js, Express.js, Axios, SendGrid.

• **CollegeBrusters web app:**

(Apr - June 2023)

- 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, MySQL, Tailwind CSS, React.js, Axios.

• **Facial Recognition Systems:**

(July - Aug 2022)

- Developed a facial authentication system using OpenCV.
- Implemented live detection techniques to enhance security and prevent spoofing attacks.
- Technology Used:** OpenCV, Face_recognition, React.js, Bootstrap CSS, Django.

Skills

Languages: C/C++, Python, JavaScript, SQL

Technologies & Tools: Django, React.js, OpenCV, YOLOv7, Tailwind CSS, Bootstrap CSS, TensorFlow, Git, Github, IDx, Neovim.

Positions of Responsibility

Karuyantra the Robotics Club

July 2023 - Present

Core Team Lead

- Led a team of 15 members as the Core Team Lead of Karuyantra, the Robotics Society at my college.