Mrityunjay Dwivedi

Bachelor of Technology
Computer Science & Engineering
Rewa Engineering College, Rewa
IIT Indore (8th Semester)

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Education

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech., CSE	Rewa Engineering College, Rewa	8.62(current)	2021-25
Senior Secondary	Board of Secondary Education MP	93.60	2020-21
Secondary	Board of Secondary Education MP	94.40	2018-19

Projects

- **ISIC Malenoma leison cell Classification Model** *January 2025 - (current)*
  under prof Dr.Surya Prakash(IIT Indore)/B.tech Major [ ]
  - CNN-based Malenoma Leison cell Detection System for accurate Skin Cancer Cell identification.
  - Implemented with PyTorch optimizing architecture for accurate, efficient Malenoma Leison cell detection.
  - Preprocessed and Augmented ISIC Dataset(2016) to improve accuracy, and reduce overfitting.
  - Optimized training using hyperparameter tuning, Heat Map and early stopping to enhance performance.
  - Achieved Train Accuracy of 0.9792, Test Accuracy of 0.8469, F1 score Val= 0.7889.

- **AI Assistant for Smart Automation** *November 2024*
  Minor Project [ ]
  - AI-powered virtual assistant capable of opening apps, playing music, news, and providing information.
  - Utilized speech recognition and text-to-speech (TTS) for hands-free operation, pyttsx3 for speech output, and Google Generative AI for command analysis.
  - Built using Python, Gemini API, and third-party APIs for data retrieval.

- **Video Conferencing Smart Web Application** *January 2025 - March 2025*
  Under prof Dr.Abhishek Shrivastava(IIT Indore)/Service Oriented System [ ]
  - Developed Developed a web-based video conferencing platform using WebRTC for real-time audio/video communication.
  - Implemented features like screen sharing, chat, and meeting scheduling for enhanced collaboration.
  - Integrated a secure authentication system to ensure user privacy Firebase Authentication for secure user login and data protection.
  - Optimized performance for low-latency streaming, improving the overall user experience.
  - Used Socket.io for real-time messaging and interactive user engagement.
  - Technologies Used: WebRTC, Node.js, Express.js, Socket.io, React.js, MongoDB, Firebase Authentication.

- **Smart Ferro-Based Solar Irrigation System Integrated with UI** *july 2024 - February 2025*
  Under prof Dr.Puneet and CIAE BHOPAL [ ]
  - Intelligent irrigation system using ferrofluid-based soil moisture sensing for precision watering.
  - Integrated IoT sensors to monitor soil moisture, temperature, and environmental conditions in real time.
  - Used MQTT protocol for real-time data communication between sensors and a cloud-based dashboard. Designed a mobile/web-based interface for remote monitoring and control via Firebase.

Technical Skills

- **Programming**: Java*, Python, C/C++, Data Structures and Algorithms (DSA)
- **Application Languages**: HTML, CSS, Javacript, NodeJS, ExpressJS, SQL, PHP, Latex
- **Databases**: MySQL, PHPMYADMIN
- **Machine Learning Tools**: NumPy, Matplotlib, Tensorflow, Torch

Achievements

- In Top 5 of IIT Indore Inbound Examination and Interview to Pursuing last semester in it
- Highest SGPA in 5 semesters and two times nine plus CGPA 9.29, 9.46.