Ishan Pardhi

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Education

- **Bachelor of Technology in Computer Science and Engineering** **CGPA: 9.03/10.0**
  VIT Bhopal University, Bhopal, Madhya Pradesh
  - **Relevant Coursework:** Data Structures and Algorithms, Database Management Systems, Operating Systems, Machine Learning
- **Higher Secondary Certificate (Class XII)** **Percentage: 78.6%**
- **Secondary School Certificate (Class X)** **Percentage: 94.6%**

Skills

- **Programming Languages:** C++, Python, JavaScript
- **Technologies/Frameworks:** MERN Stack (MongoDB, Express.js, React, Node.js), HTML, CSS
- **Machine Learning:** TensorFlow, Keras, OpenCV, ResNet-50
- **Tools & Platforms:** Git, Docker, VS Code, LeetCode, Codeforces
- **Core Concepts:** Data Structures, Algorithms, System Design, Web Development, OOP

Competitive Programming

- Solved 500+ algorithmic challenges on platforms like LeetCode, Codeforces, and GeeksforGeeks.
- Proficient in advanced algorithms including Dynamic Programming, Graph Theory, and String Matching (KMP).
- Actively compete in coding contests to sharpen problem-solving and code optimization techniques.

Projects

- **Brain Tumor Classification using ResNet-50**
  - Engineered a deep learning model with ResNet-50 architecture to classify brain tumors from MRI scans, achieving over 90% accuracy.
  - Implemented data preprocessing and augmentation on a Kaggle dataset using TensorFlow and Keras.
  - Trained the model for 50 epochs utilizing the Adam optimizer and categorical cross-entropy loss function.
  - Visualized model performance by plotting accuracy and loss graphs with Matplotlib.
- **Real-Time Heart Rate Detection from Webcam**
  - Developed a computer vision system in Python using OpenCV to detect heart rate in real-time from a user's facial video stream.
  - Applied digital signal processing techniques to extract photoplethysmographic (PPG) signals from pixel intensity fluctuations.
  - Achieved a high degree of accuracy, with a low error margin of ± 5 BPM when validated against medical-grade devices.

Achievements

- Demonstrated strong problem-solving abilities by consistently solving complex DSA challenges on competitive programming platforms.
- Received commendation from academic supervisors for the technical depth and clear presentation of the Brain Tumor Classification project.