

# Harsh Pratap Singh

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🐙 github.com/Harsh-Pratap-Singh

## Education

### B.Tech in Computer Science and Engineering

2022 – 2026

- VIT Bhopal University, Madhya Pradesh
- CGPA: 8.83 / 10

### Class XII (Intermediate) – CBSE

2022

- Central Academy, Jabalpur
- Score: 87.2%

### Class X (Matriculation) – CBSE

2020

- K.V no 1. G.C.F, Jabalpur
- Score: 91.4%

## Project Experience

### PolypClassifier - Automated Polyp Detection — Group Project

Feb 2024 – Apr 2024

- Developed a CNN-based medical image classification system for colorectal polyp detection.
- Tuned hyperparameters, achieving a model with 0.9 dropout rate for best performance.
- Improved model accuracy by 15% through data augmentation and hyperparameter tuning.
- Initial Accuracy: 80% (Training), 79.1% (Validation).
- Post-Tuning Accuracy: 96.5% (Training), 94.9% (Validation).
- Tech Stack: Python, Keras, TensorFlow, NumPy, Matplotlib, Scikit-learn.

### Transformer Model for English-to-Hindi Translation — Self Project

Oct 2024 – Dec 2024

- Built a Transformer-based NLP model inspired by “Attention Is All You Need” architecture.
- Designed multi-head attention and encoder-decoder with positional encoding.
- Processed datasets using custom tokenizers and padding masking.
- Achieved high translation accuracy on a parallel English-Hindi corpus.
- Tech Stack: Python, TensorFlow, Deep Learning, NumPy.

## Technical Skills

**Programming Languages:** C, C++, Python, Java, JavaScript

**Machine Learning & Data Science:** TensorFlow, Keras, Scikit-learn, NumPy, Pandas, Power BI

**Web Development:** HTML, CSS, JavaScript, Flask

**Databases & DevOps:** MySQL, Git/GitHub, Docker

## Online Courses

- **The Bits and Bytes of Networking** (Google, Coursera)  
Mastered TCP/IP, OSI model, DNS, subnetting, routing fundamentals, and network troubleshooting.
- **Cloud Computing** (NPTEL - IIT Kharagpur)  
Expertise in IaaS, PaaS, SaaS, virtualization, cloud deployment, Docker, and cloud security.

## Co-Curricular Activities

- **LeetCode:** 900+ problems solved (DS & Algorithms), Global Rank 589/26,000+ in biweekly contest, 500+ days streak, 26 badges earned.
- **GeeksforGeeks:** Contest Rating 1770, Global Rank 3656.

## Extracurricular Activities

- Avid reader: completed 100+ books favorite books include Siddhartha, Animal Farm, and Tao Te Ching.
- Philosophy enthusiast inspired by Confucius, Friedrich Nietzsche, and Albert Camus.
- Completed 8-hour Udemy course on Mind Mapping for strategic planning.