

# HARSH KUMAR



॥ त्वं ह्यसमये विद्यामयोऽसि ॥

✉ kumar.218@iitj.ac.in | 📞 +91-9528136911 | 🌐 geekyharsh01 | in Harsh-Kumar | 🛠️ GFG | 🏆 leetcode

## EDUCATION

### IIT JODHPUR

B.TECH IN ARTIFICIAL INTELLIGENCE  
& DATA SCIENCE

2020 - 2024\* | Jodhpur, India  
CGPA: 6.64/10 (till 6<sup>th</sup> Sem)

### SHIWALIK PUBLIC SCHOOL

CBSE BOARD | AGRA, INDIA

Class XII: 93.6% | May 2019

CBSE BOARD | AGRA, INDIA

Class X: 9.2 CGPA | May 2017

## SKILLS

### PROGRAMMING

PROFICIENT

C/C++

Python

HTML

CSS

FAMILIAR

Bash

Java

Javascript

LaTeX

Django

Bootstrap

NodeJs

### MACHINE LEARNING

\*Built all ML models and Deep NN models from scratch

Deep Learning

Numpy

Pandas

CUDA

Pytorch

Tensorflow

ChatGPT

Jupyter Notebook

### MISCELLANEOUS

R

SQL

Linux

Tableau

Excel

Github

Sklearn

opencv

Json

Extensions

## COURSEWORK

### UNDERGRADUATE

- Data Structures and Algorithms
- Design and Analysis of Algorithms
- Deep learning
- Data Engineering
- Artificial Intelligence
- Introduction to Blockchain
- Cyber Security
- Data Visualization
- PCS-II (OS and Computer Network)
- PCS-I (Compiler Design and Computer Architecture)
- Pattern Recognition and ML
- Probability, Statistics and Stochastic Process

## PROJECTS

### CLIP EXPLAINABILITY | DEPENDABLE AI PROJECT 🌐 | 🏆

📅 Jan 2023 - May 2023 | Supervisor: Dr. Richa Singh

- Demonstrated the Explainability for powerful and sophisticated neural network architecture **CLIP (Contrastive Language-Image Pre-training)** model.
- The methodology implemented is inspired from this [paper](#) uses **attention layers** of a **Transformer-based architecture** to generate **relevancy maps** for interactions between input modalities.
- The method is implemented in **Colab** using Python and **Github** and hosted on **hugging face** using **Streamlit** technology.
- Tech Stack: **Torch, Colab, Python, Cuda, Github, OpenCv, Matplotlib, Hugging Face, Streamlit, Jupyter Notebook**

### PANDEMIC PULSE | DATA VISUALIZATION PROJECT 🌐 | 🏆

📅 Jan 2023 - May 2023 | Supervisor: Dr. Suman Kundu

- Created a **nice and clean Interactive Dashboard** for **Covid-19** that provides an overview of the **pandemic** from **January 22, 2020 to June 4, 2020** using **Data**.
- **Beautiful** interactive **plots** have been made using **bar graph, line graph and maps** to clearly see the **variation** of the **pandemic** and hosted on [public.tableau](#).
- Tech Stack: **Tableau, Dashboard, Data Processing, visualization**

### WAVY MUSIC | WEB DEVELOPMENT PROJECT 🌐 | 🏆

- Created a **nice and beautiful front-end** design for a **music player** similar to the popular music player **Spotify** hosted on [page.cloudflare](#).
- Tech Stack: **HTML, CSS, CloudFlare, Bootstrap**

### WEBCHAT APP | WEB CHAT APPLICATION PROJECT 🌐

📅 Jan 2022 - May 2022 | Supervisor: Dr. Suchetana Chakraborty

- Built a dedicated **web-based real-time chat application** with simple front-end design and comes with **features** like **messaging, voice typing, new message notification and multi-users chatting**.
- used **Socket.IO** library at **back-end** that enables **low-latency, bidirectional and event-based communication** between a **client** and a **server**.
- Tech Stack: **HTML, CSS, JavaScript, NodeJs, Socket.IO**

### YAY! MUSIC | ANDROID DEVELOPMENT PROJECT 🌐

- Created a **user-friendly music Apk** for **Android Smartphone** users.
- features includes: **automatically detect media** from the device, **play/pause** Button, **smooth slider** and **next/prev** buttons.
- Tech Stack: **Java, XML, Android Studio, Android Virtual Device (AVD)**

## ACHIEVEMENTS

2022 **Core member** of **Robocon'22** team **IITJ**. In round-1 we **secured 100%** score and came in **top 10** colleges of India.

2020 **Cleared** one of the **toughest Exam** of India, **JEE Advanced** with **All India Rank 7048** and **Category Rank - 1240**.

## EXTRACURRICULAR

- **Participated** in various **technical and cultural** events like **Hackathon, Ideathon, Dance, Acapella** in college fests.
- Plays **Basketball** as a hobby.