# Nitish Bhardwaj



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# Personal Statement

As a motivated student, I'm passionate about Artificial Intelligence, especially in the field of machine learning and computer vision, aiming to gain expertise and contribute to impactful projects.

### EDUCATION

Degree/Certificate	${\bf Institute/Board}$	CGPA/Percentage	Year
B. Tech.	Indian Institute of Technology Jodhpur	8.31	2021-2025
Senior Secondary	CBSE Board	95.8%	2021
Secondary	ICSE Board	98.2%	2019

# PROJECTS

#### MensWear Classification

Aug. 2023

Course Work Project, Guide: Dr. Pratik Mazumder, Assistant Professor, IIT Jodhpur

Github

- Designed a CNN for Mens Clothing classification and created dataset with 411 self captured images.
- Employed transfer learning on CNN trained on regular images, and achieved 30% increase in accuracy on partially masked images.
- **Deployed** the model using Flask, enabling users for clothing classification
- Tools / Technologies: Python, PyTorch, OpenCV, Flask.

#### • NCVPRIPG Writer Verification

May. 2023 - Jul. 2023

Self-paced Project

Github

- Engineered a Siamese Network architecture with KNN classifier for writer verification in order to authenticate handwritten documents.
- Attained a 20% boost in AUC compared to pre-trained models while training on real-life handwritten Hindi dataset.
- **Deployed** the model using the **Flask**, allowing users to verify handwritten documents.
- Tools / Technologies: PyTorch, Scikit-learn, OpenCV, Flask.

# • Network Intrusion Detection

April 2023

Exploratory Project, Guide: Dr.Ravi Yadav, Assistant Professor, IIT Jodhpur

Github

- Utilized the CICIDS2017 dataset, comprising network features like IP addresses, ports, packets, payload data, and protocols.
- Bulit a model which could detect trojans by examining network behavior and statistical changes in network traffic, achieving an accuracy of 99.2% on this dataset
- Tools / Technologies: TensorFlow, Scikit-learn, Numpy, Pandas, Matplotlib.

# • Virtual Application Deployer

March 2023

 $Course Work\ Project,\ Guide:\ Dr.\ Lawqueen\ Kanesh,\ Assistant\ Professor,\ IIT\ Jodhpur$ 

Github

- Developed a **web application** on a **virtual machine**, ensuring seamless access from both another VM and the host application
- Implemented CRUD functionality for secure data manipulation in a MySQL database, offering a user-friendly interface
- Tools / Technologies: HTML, PHP, MySQL, Virtual Box.

## TECHNICAL SKILLS

- **Programming**: Python, C++, HTML, CSS, MySQL, MongoDB
- Tools/Frameworks: Pytorch, TensorFlow, Flask, ML Libraries
- OS/Others: Windows, Ubuntu, Latex, Github

### KEY COURSES TAKEN

Pattern Recognition and Machine Learning, Principles of Computer Systems, Data Structures and Algorithms, Introduction to Computer Science, Linear Algebra, Probability, Maths for Computing, Signals and Systems

### ACHIEVEMENTS

- NCVPRIPG: Ranked among the top 10 competitors in the competition.
- Branch Changer: Only top 3% academic performers gets the chance for branch change at the end of first year.
- MTA: Introduction to Programming Using Python Microsoft Certified 2022.
- City topper: Secured 2nd rank in the Kanpur City in Class 10th ICSE Board Examinations
- Epoch Olympiad Scholar: Started giving Olympiad from Class 6 to 10. Achieved 2 gold, 2 silver, 3 bronze medals.