PRANJAL MAIRAL

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SUMMARY:

An Undergraduate student at Institute of Technology, Nirma University pursuing B.Tech in Electronics and Instrumentation Engineering. I am experienced in machine learning and data science with a keen interest in software/web development.

TECHNICAL SKILLS:

- **Programming Languages:** Python, C/C++
- **Machine Learning -** Pytorch, Tensorflow, OpenCV, Data Science, Data Analysis, Deep Learning
- **Frontend -** HTML5, CSS, JavaScript, React.Js, Next.Js
- **Databases -** SQL, DBMS, MongoDB

EXPERIENCE:

AI/ML Research Intern - Research Centre Imarat, DRDO **|** Jan 2024 - Present

- Researching on AI/ML Applications of fully programmable NAO Humanoid robot. Currently trying to combine it's audio and visual capabilities and built a deep learning robust model which can be integrated with the robot to solve real world defence problems.

Machine Learning Intern - IIT Delhi AIA FSM (Samarth Udyog) | June 2023 - July 2023

- I completed a machine learning project on "Network Communication Anomaly Detection" based on KDD cup Dataset where I applied a lot of data science techniques and trained 7 models (ANN, Gradient Boosting Classifier etc) and compared the performance. I achieved an average accuracy of 99.2%.

EDUCATION:

- **B.Tech Electronics and instrumentation Engineering |** Institute of Technology, Nirma University
  CGPA : 8.57 (Bronze Medal) | (Oct 2020 - May 2024)
- **12th |** Joy Senior Secondary School **|**Percentage: 79% | (April 2018 - May 2019)
- **10th |** Joy Senior Secondary School **|** CGPA : 9.0 | (April 2016 - May 2017)

ACADEMIC PROJECTS:

Amazon Clone

- Currently learning full stack development (MERN Stack) and trying to create a clone of amazon shopping website using HTML, CSS, JAVASCRIPT and MERN.

Lung Xray Disease Classification using Deep Learning and Image Processing

- Completed my minor project on the multiclass classification project, where there were 4 classes (pneumonia, TB, Covid19, Normal) and the dataset was a lung Xray image taken from kaggle. Applied a lot of preprocessing, image processing, and data augmentation techniques to increase 2gb data to 9gb data and achieved an accuracy improvement from 64% to 85%.

Spam Email Detection Using Machine Learning

- Developed a spam email detection and classification algorithm which classifies email into spam/not spam. I applied many data preprocessing and language processing techniques and achieved an accuracy of 99% in my ML models.

PUBLICATION:

- **SURVEY PAPER:** "A Review of Diverse Machine Learning Algorithms for Spam E-mail and Text Detection" (Accepted by IEEE ELEXCOM 2023)) | Aug 2023
- **BOOK CHAPTER:** "Security and Privacy in the Internet of Medical Things (IoMT)-Based Healthcare: Ensuring Trust and Safety" (Accepted in 2023 3rd International Conference on (IoTML 2023)) | Sept 2023