# SANDESH SHRESTHA

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📞 +91 8527703485  🌐 Portfolio  ⭘ GitHub in LinkedIn

## EDUCATION

| Year | Degree / Examination | Institute | CGPA/% |
|------|---------------------|-----------|--------|
| 2021-2025 | B.Tech in Computer Engineering | Delhi Technological University, Delhi | 9.30 |
| 2020 | NEB (XII) | Capital Secondary School, Kathmandu | 96.25% |
| 2018 | NEB (X) | Janajyoti Vidyamandir, Dang, Nepal | 97.50% |

## INTERNSHIP

**Research Intern at Machine Learning Research Laboratory, DTU**　　　　　　　　Jun 2024 - Present
*Host: Prof. Anil Singh Parihar*

- Conducted extensive research on human action recognition, specializing in Temporal Difference Networks (TDN), Temporal Segments Networks (TSN), Transformers based models and pioneered blog posts and practical explanations on TDN filling a notable gap in the research community.

- Currently working on a research project aimed at significantly advancing action recognition accuracy on the Moments in Time dataset targeting an improvement beyond the current SOTA 53.1% using novel multimodal & hybrid masked pretraining deep learning techniques.

## ACADEMIC PROJECTS

1. **ByteKrushr** — *Compression Algorithms, Python, C++, Streamlit*　　　　　App Link — GitHub

   - Developed a Streamlit app for compressing and decompressing text files using LZ77, LZW, Huffman coding, and DEFLATE, achieving up to 70% file size reduction with real-time processing speeds of 2 MB/s for compression and 3 MB/s for decompression.
   - Developed a user-friendly interface for file uploads, algorithm execution, and downloading processed files, enhancing user experience and cutting task completion time by 15%.

2. **arTransfer** — *PyTorch, OpenCV , Streamlit, Computer Vision*　　　　　App Link — GitHub

   - Developed a Neural Style Transfer application enabling custom & pretrained model-based image stylization, integrating a user-friendly Streamlit GUI for interactive image processing, achieving an average image transformation time of 1.8 s/image.
   - Wrote scripts for model training with the MSCOCO dataset and live training with custom style images.

3. **PoseDet** — *Python, YOLOV8, OpenCV, Streamlit*　　　　　App Link — GitHub

   - Developed a Streamlit app utilizing YOLOv8 models for real-time pose estimation, object detection, and segmentation. Supports three input options (image upload, video upload, and real-time webcam processing) and provides efficient processing with up to 20 FPS for high-resolution content, ensuring accurate analysis and seamless result downloads.

## TECHNICAL SKILLS

- **Languages:** C , C++ , SQL , HTML/CSS , Python
- **Skills:** Data Structures , Algorithms , Machine Learning , Deep Learning , Graphics Design
- **Technologies:** PyTorch , Scikit-learn , MySQL , Streamlit
- **Version Control and OS:** Git , GitHub , GitHub Actions , Linux

## ACHIEVEMENTS

- Awarded the prestigious by the GSS/2021 Scholarship-ICCR; secured comprehensive full funding for advance studies at top-tier universities due to outstanding academic achievements and innovative research initiatives.

## POSITIONS OF RESPONSIBILITY

- **Technical Activity Coordinator, International Students' Society**　　　　　　2022 - 2023
  - Led a team in developing and maintaining the International Students' Society website and dashboard, reducing processing and official work times from 5 days to 1 day.
  - Designed brochures, banners, flyers, videos, and many more event graphics using CorelDRAW, Photoshop, DaVinci Resolve and other professional editing tools.