

SWARNIM SHARMA

B.TECH INFORMATION TECHNOLOGY & MATHEMATICAL INNOVATION

Third Year at CIC, University of Delhi | swarnim175@cic.du.ac.in | 8595600798 | [LinkedIn](#)

EDUCATION

Undergraduate (IT & MI) : Cluster Innovation Centre, University of Delhi | Expected 2026 | CGPA: 8.41/10.0

Intermediate (HSC) : Akash Public School | 2022 Percentage : 77.4/100

Matriculation (SSC) : Oxford Senior Secondary School | 2020 Percentage : 93/100

SKILLS

Programming Languages :

- C/C++
- Python
- JAVA
- R-statistical computing
- MY-SQL

Others :

- Neuroscience
- Stereotaxic surgery
- In-Vitro EEG
- Neuroimaging
- Data Analysis
- Gel Electrophoresis

Soft Skills:

- Research Skills
- Presentation
- Communication
- Leadership
- Teamwork

Tools/Platforms:

- MATLAB
- CANVA
- Windows/LINUX

PROJECTS

- **IMAGE STEGANOGRAPHY :** Developed a hybrid decoding method for image steganography using LSB and SSIS algorithms, gaining expertise in image processing, cryptography, and steganalysis metrics like PSNR and SSIM. Successfully extracted hidden messages from encoded images.
- **STOCK PREDICTION USING DIFFERENT ML MODELS AND FORECASTING FINANCIAL CRASH :** Implemented machine learning models (LSTM, Adaline, Linear Regression) for stock price prediction and financial crash forecasting. Found LSTM to be the most accurate and robust model. Analyzed technical indicators (DPO, VWAP, MACD, HULL, MFM, Volume, Closing Prices) to identify patterns and predict potential market crashes.
- **ODE-INSPIRED IMAGE DENOISER :** Developed an ODE-inspired image denoising network (DDNet) by formulating the denoising process as a dynamical system. Implemented cascaded OI-Blocks to iteratively approximate noise distribution. Achieved state-of-the-art denoising performance with fewer parameters on both synthetic and real noisy images.
- **GREEN SYTHESIS OF ZINC OXIDE NANOPAETICLES :** Learned green synthesis, characterization and interaction studies of ZnO NP's and CT-DNA using physiochemical techniques. Used FTIR (Fourier Transform Infrared Spectroscopy) and UV- Spectroscopy characterization techniques

EXPERIENCE

- **Summer Intern - Neuroscience and Neurophysiology (AINN, Amity University, Noida) :** Completed a SERB-DST funded internship at AINN, focusing on "Investigating physiological alterations in cortical signaling during retinal degeneration: Implications for vision restoration." Utilized EEG and advanced signal processing techniques to analyze cortical signaling, contributing to cutting-edge research in retinal degeneration and vision restoration. This experience enhanced my skills in neuroscience and signal processing.

PUBLICATIONS

- **"Solar Distillation System Using Nanofluids" :** Swarnim Sharma, Dr.Lovedeep Sahota, Dr.Swati Arora (Manuscript Under Preparation)

EXTRA CURRICULARS

- **Accenture North America Data Analytics and Visualization Job Simulation on Forge-Aug 2023 :** Completed a simulation focused on advising a hypothetical social media client as a Data Analyst at Accenture | Cleaned, modelled and analyzed 7 datasets to uncover | Insights into content trends to inform strategic solution.