OINDRILA HALDAR

IISc Bangalore, India
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Date of Birth: 28/08/2000 — Nationality: Indian — Gender: Female

EDUCATION

M.Tech. in Signal Processing (currently completed 2nd of 4 semesters) — July 2023 — 2025
Indian Institute of Science, Bangalore, India — CGPA : 8.9/10.0

B.E. in Electrical Engineering — August 2019 — May 2023
Jadavpur University, Kolkata, India — Overall CGPA : 9.45/10.0

All India Senior School Certificate Examination (12th Std.) — 2019
Kendriya Vidyalaya, Haldia, West Bengal, India — Percentage: 96.6

All India Secondary School Examination (10th Std.) — 2017
Bharatiya Vidya Bhavan, Haldia, West Bengal, India — CGPA: 10/10

EXPERIENCE

1. **Qualcomm India Pvt. Ltd.**, Hyderabad, Telengana
   Interim Engineering Intern — *May,2024 - July, 2024*
   - **Team:** ML Model Development Team
   - **Project Title:** Reflection Removal from Human Eyeglasses
   - **Project Objective:** Removing reflection from spectacle worn by individuals.

2. **Indian Institute of Technology Kanpur**, Uttar Pradesh
   Summer Undergraduate Researcher — *May, 2022 - July, 2022*
   - **Project:** Convolutional Neural Networks for Visual Recognition

3. **Indian Institute of Technology Guwahati**, Assam
   Summer Undergraduate Intern — *July, 2021 - September, 2021*
   - **Project:** Consensus to Multi-agent Systems

PROJECTS

1. **Beyond the Canvas of One: Expanding the Horizons of Single-Image Generation**
   Associated with IISc, Bangalore — April 2024 - May 2024
   - The project implements the Enhanced SinGAN model, a robust and versatile version of the original SinGAN model (Shaham et al., ICCV, 2019).
   - The Enhanced SinGAN is designed to be less sensitive to input image quality, enabling it to generate clean images even from noisy inputs by introducing Total Variational Loss.

2. **Exploring the Impact of Image Pre-Processing on Human Face Detection in Poor Quality Images**
   Associated with IISc, Bangalore — Oct 2023 - Nov 2023
   - This project explores the effect of different pre-processing techniques such as image denoising, deblurring, and contrast enhancement on face detection performance.

3. **Convolutional Neural networks for Visual Recognition**
   SURGE Internship, IIT Kanpur under the guidance of *Prof. Ketan Rejawat of Electrical Engineering, IITK* — May 2022 - July 2022
   - This project deals with deep learning models such as CNNs, GANs, RNNs for different tasks such as image classification, generation and captioning.

4. **Dynamics and Control of Quadrotor**
   Carried out at Jadavpur University, Kolkata August 2022 - May 2023

   - This project deals with the dynamics and control of a quadrotor in a predefined path using MATLAB and Simulink.

5. **Introduction to Consensus of Multi-agent Systems**
   Carried out under the guidance of *Prof. Chayan Bhawal of Electronics and Electrical Engineering, IITG*
   July 2021 - September 2021

   - This project deals with consensus algorithms of single-integrator dynamics of multi-agent systems under fixed interaction topologies.
   - Two algorithms were contemplated on for the study, *fundamental consensus algorithm* and *leader-follower consensus algorithm*. Furthermore, invariant communication topologies and communication delay topologies were considered for each algorithm.

ACHIEVEMENTS

1. **GATE Ranks** 2023
   - **Electrical Engineering:** *AIR 226*
   - **Instrumentation Engineering:** *AIR 67*
2. **3rd out of about 140 students in B.E. Electrical Engineering, Jadavpur University.**
3. **Jagadis Bose National Science Talent Search (JBNSTS) Senior Scholarship** awarded by Govt. of West Bengal, India. (https://jbnsts.ac.in/findbyname.php) 2019
4. **Certificate of merit by Kendriya Vidyalaya Sangathan** (an autonomous body under Ministry of Education, Govt. of India) for performance in 12th Standard Examination. 2019
5. **School Topper** in 12th Standard Examination 2019

RELEVANT COURSES

- Digital Image Processing
- Advanced Image Processing
- Pattern Recognition and Neural Networks
- Time Frequency Analysis
- Random Processes
- Matrix Theory
- Linear and Non-linear Optimization
- Signal Processing in Practice

DIGITAL SKILLS

- **Programming: Python** (PyTorch, Tensorflow, OpenCV, Keras, Scikit-Learn, Scikit-Image), **C++**, MATLAB, Simulink, SQL

HOBBIES

- Painting
- Singing
- Writing Poems
- Reading Novels
- Meditation