



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2022	M.TECH Dual Degree 5Y	IIT Kharagpur	9.27 / 10
2017	All India Senior School Certificate Examination	D.A.V. Public School, Unit 8, Bhubaneswar, CBSE	96.6%
2015	All India Secondary School Examination	D.A.V. Public School, Unit 8, Bhubaneswar, CBSE	10 / 10

COMPETITION/CONFERENCE

The 2018 ICPC Asia Amritapuri Regional Contest (ACM ICPC 2018)

Honourable Mention at ACM ICPC Asia Amritapuri Site 2018, An algorithmic programming contest for college students, ranked 1st among all the sophomore teams from IIT Kharagpur.

Online Competitive Programming

Actively involved in the sport of Competitive Programming at various popular online judges.

- Codeforces: Master(title) on Codeforces platform with a rating of 2113 and Among Top 0.5% of all participants over the world. User ID: TheFenrir
- Codechef: 5 Star on Codechef platform with a rating of 2136 and Among Top 0.5% of all participants over the world. User ID: the fenrir
- 2020 CodeJam, Google: Qualified for Round 2 and placed among Top 2.5% of all participants over the world.
- 2019 Kickstart Round E, Google: Ranked 148th among 2500 participants.

2020 Face Counting Challenge (DataHack, Analytics Vidhya)

Implemented RetinaNet, which is a Feature Pyramid based Network, using FastAI and PyTorch libraries, to detect bounding boxes around human faces in images, and thus count the number of faces in the image. Currently Placed at Rank 24 among 200 participating teams.

2020 Source Code Event (Kshitij 2020, IIT Kharagpur)

Bagged 2nd Prize. It is a coding event in IIT Kharagpur's techno-management fest Kshitij where you are given an executable file and have to guess the pattern and write the code for it.

2019 ML/AI Challenge (Flipkart GRiD Te[a]ch The Machines, 2019)

Trained a neural net similar to VGG-19 (using Transfer Learning) for determining bounding box co-ordinates of various objects and subsequently placed 1st from among 1500 qualifying teams in level 3 of the competition.

2019 Netapp Data Challenge (Kshitij 2019, IIT Kharagpur)

Placed 2nd among more than 150 teams, held at a Data Analytics Event in Kshitij, The Annual TechnoManagement Fest of IIT Kharagpur. Built a News Classifier categorizing News Headlines with Short Descriptions using simple Bag of Words approach.

WORK EXPERIENCES

Human Action Recognition in Indian Classical Dance (Supervisor: Prof. Dr Partha Pratim Das)

- An ongoing project which aims towards human action recognition in the renowned Indian dance form Kathak from videos, to finally, be able to transcribe the whole video for a systematic study of the dance form.
- Worked on Spatiotemporal Saliency Detection based on Optical Flow computation using pyflow based on Coarse to Fine approach and Superpixel Segmentation using Simple Linear Iterative Clustering (SLIC) algorithm to effectively segment the subject(i.e the dancer) from the background and detect regions of significant motion from the video frames.

Kharagpur Robosoccer Students Group (KRSSG) (Supervisor: Prof. Alok Kanti Deb)

- Kharagpur Robosoccer Students Group, a research group dedicated to developing robotics hardware and control architecture for a 6 v/s 6 soccer match in RoboCup Small Sized League.
- Implemented Fuzzy Logic based on a modified version of the Mandamani approach for PID Motor Control which had a very fast response compared to traditional PID Controllers for SSL Robots, to be taking part at RoboCup 2019.

AWARDS AND ACHIEVEMENTS

Joint Entrance Exam(Advanced) 2017

AIR 970, Under top 0.48% amongst more than 2,00,000 students.

Kishore Vaigyanik Protsahan Yojana 2015 (SA Stream)

AIR 526, A National Program of Fellowship in Basic Sciences, initiated and funded by the Department of Science and Technology, Government of India.

NTSE 2014 Scholar

A national-level scholarship program as well as one of the oldest and most prestigious examinations in India conducted by NCERT.

SKILLS AND EXPERTISE

- **Interests:** Machine Learning, Computer Vision, Competitive Programming, Chess
- **Programming Languages:** C/C++, Python
- **Libraries / Frameworks:** PyTorch, FastAI, Tensorflow, Keras, OpenCV, scikit-image, Numpy, Pandas
- **Systems / Platforms:** Git, Windows, Linux, Android

COURSEWORK INFORMATION

Undergraduate Courses:

Machine Learning, Algorithms-I(Theory and Lab), Probability and Stochastic Processes, Programming and Data Structures(Theory and Lab), Introduction to Internet

MOOCs:

- Machine Learning (Offered by Stanford University at Coursera)
- Deep Learning Specialization (by deeplearning.ai via Coursera)
- Convolutional Neural Networks for Visual Recognition(Offered at Stanford University as CS231n)
- Practical Deep Learning for Coders(Offered by FastAI)
- Deep Learning from the Foundations(Offered by FastAI)