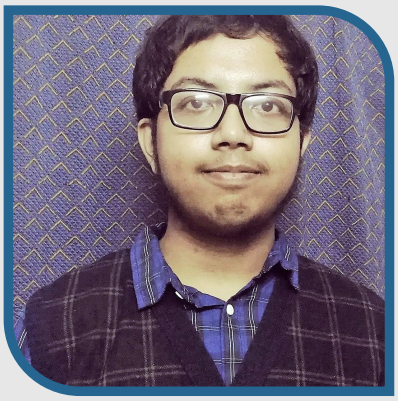

Rudrajyoti Roy

Second Year Undergraduate
Department of Electronics & Electrical Communication Engineering
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Interests

- Pattern Recognition
- Digital Signal Processing
- Circuit Designing
- Algorithms
- Embedded Systems Design
- Deep Learning and AI
- IoT and Process Automation
- Robotics and Computer Vision

Skills

Programming and System Design:

- C, C++ ●●●●●
- MATLAB, Octave ●●●○○
- Python ●●●●○
- Arduino IDE ●●●●○

CAD Tools:

- SolidWorks ●●●●○
- LTSpice, EasyEDA ●●●●●

Experience

Mar, 2019 – ongoing — **Embedded Electronics Team Head** — **SWARM Robotics Research Group**
Our work includes designing circuitry of robots using microprocessors and microcontrollers, troubleshooting any errors and coding for basic functionality like movement and actuation, sensor data processing, hierarchical control architecture etc.

Jan 2020 — **Tesseract Robotics Competition Team Leader** — **Kshitij**
We built an arduino based autonomous robot that detects and decodes RFID cards to solve maze. We scored 100% points in preliminary round and won the **2nd runner up** position in final round of Tesseract event in Techno-management fest Kshitij.

Education

Undergraduate Studies

2018 – 2022 — **B.Tech in Electronics and Electrical Communication Engineering** — **IIT Kharagpur**
Grade: CGPA: **9.18/10** (After fourth semester)
Relevant Courses Completed(with A/EX grade) :
ET60007 Digital Speech Processing
CS40019 Image Processing | MA20107 Matrix Algebra
CS11001 Programming and Data Structure
EC21103 Introduction to Electronics | CS21003 Algorithms-I
EC21008 Analog Electronics

2010-2018 — **Schooling upto Higher Secondary Examination** — **KUEHS**
Marks Percentage: : 91.8% (Higher Secondary)

Online Courses (Completed) — **Deep Learning Specialisation** — **Deeplearning.ai (Coursera)**
Concepts Learnt: : Theoretical and applied image recognition, pattern recognition, data classification and sequence models using convolutional and recurrent neural networks.
Guided Video Projects
Object Tracking, Deepfake generation using DCGAN
Live emotion detection using Keras

Project and Research

Non-academic Project

Dec 2019 – ongoing — **Gas Sensing and Recognition**
Guide: Prof Tarun Kanti Bhattacharya
Project : Working on pattern recognition of data from RGO based resistive Gas-Sensors and qualitative analysis of gases present and their relative concentration in Gaseous Sample

Achievements

2018	JEE Advanced	AIR 1320
2018	JEE Main	AIR 2803
2017	KVPY SA-E fellow	AIR 3
2013	NSTSE	AIR 9

Co-Curricular Activities

Sports — Chess, Table Tennis, Badminton
Cultural — Singing, Recitation, Sketching, Photography