



## ELECTRONICS AND TELECOMMUNICATION ENGINEERING (B.Tech 4Y)

### ETC SOPHOMORE in ELECTRONICS COMMUNICATION ENGG

#### EDUCATION

| Year | Degree/Exam                                      | Institute                | CGPA/Marks |
|------|--|--------------------------|------------|
| 2020 | B.TECH Degree 4Y                                 | IIST Shibpur             | 9.19 / 10  |
| 2018 | Indian Certificate of Secondary Education (ICSE) | St James School, Kolkata | 92.4%      |
| 2020 | Indian School Certificate Examination (ISC)      | St James School, Kolkata | 92%        |

#### INTERSHIPS/EXPERIENCE

##### Summer Research Internship | Indian Statistical Institute, India [July 2021- September 2021]

- Worked on and laid the foundation of the Project titled "Mapping areas using Computer Vision Algorithms and Applications"
- Incorporated pose estimation model in drones using MPII dataset using Computer Vision
- Learnt generative adversarial networks (GAN) to implement them in Image Segmentation models

##### Winter Research Internship | Jadavpur University, India [October 2021- Present ]

- Predictive Analytics and Medical Image Segmentation used in Machine-assisted Diagnosis
- Practical application of Mask-R Convolutional Neural Network to increase efficiency of detection of tumors

**Girlsript Winter of Contributing [Contributor]:** Contributed to the domains of ML, DSA, and Frontend Development.

#### COMPETITION/CONFERENCE/ORGANISATIONS

**Google Kickstart:** Ranked **3148th** among **6,950** participants in Round E, 2021 and **3165th** among **9,355** participants in Round C, 2021

**American Society of Mechanical Engineers [ASME]:** Elected student member of ASME for the year 2020-2021

#### PROJECTS

##### Unbeatable Tic Tac Toe game made by Python using Open-Cv Image Processing 2021 [July 2021-September 2021]

- **Guide:** Prof. Subhamoy Moitra, Prof. Rajat De | Research B.Tech Project | Applied Statistics Department, ISI Kolkata
- Developed a Convolutional Neural Network to detect for each cell in the grid whether there's an X, O or nothing.
- Demonstrated that and achieved an average efficiency score of  $0.9891 \pm 0.009$  out of 1 with a limited dataset of 170 images.

##### Quantum Computing Project | Prof. Subhamoy Moitra | Applied Statistics Department, ISI Kolkata [July 2021-Sept 2021]

- Implemented Quantum Circuits using IBM Q Experience (OPENQASM 2.0) and Quiskit (Quantum Simulation Library in Python).

#### COURSEWORK INFORMATION

**Computer Science Engineering:** Algorithms \* | Computer Architecture and Operating System | Computer Networks | Image Processing | Computer Vision | Programming and Data Structures\*

**Electronics and Communication:** Digital Electronics\* | Analog Electronics\* | Network Theory | Microprocessors\* | Control System Engineering\* | Signals and Systems\* \*Includes Laboratory along with Theory

#### SKILLS AND EXPERTISE

**Programming Languages:** Fluent: C, C++, Python, JavaScript | Familiar: Sass, MIPS Assembly

**Tools/Libraries:** React, Git, Bash, HTML, CSS, NumPy, Matplotlib, MATLAB

#### AWARDS AND ACHIEVEMENTS

Qualified for **National Standard Examination in Chemistry [NSEC]** during the year 2019-2020.

Awarded the **Scientist Incentive Plan i.e. KVPY Fellowship Award 2018** by Indian Institute of Science, Bangalore

#### EXTRACURRICULAR ACTIVITIES

**Alpha Microsoft Learn Student Ambassador :-** Conducted programs and part of a community of Microsoft professionals.

**Student Mentor** under Vivekananda Youth Circle, IIST Shibpur for a group of 5 Students **[August 2021-Present]** ! self-declaration by the student