

EDUCATION

Institute of Radio Physics and Electronics, University of Calcutta
Bachelor of Technology, Electronics and Communication Engineering

2019.05-Current

EXPERIENCE

StackGuardian

Software Engineer(Intern)

Kolkata, India
2022.06-Current

- Working as a Backend developer(Python) and Cloud Architect, writing Python evaluators for AWS and unittests.
- Writing pytests for various python evaluators implemented in the Backend for cloud orchestration, working on a terraform alternative for Infrastructure as Code
- Fixing minor Frontend bugs(Reactjs) and implementing small features.

Indian Railways- Traction Distribution Department

Undergraduate Trainee

Kolkata, India
2022.05-2022.06

- Getting trained in Overhead Equipments, Power Systems and Remote Control
- Building a smart Isolator that trips when there is a voltage surge
- Doing field-work on checking transformers in 132kV/27kV Sub-station

Centre for Development of Advanced Computing

5G-ML Research Intern

Remote, India
2022.03-2022.07

- Implementing Virtual 5G connection between 5G Core and User Equipments(UEs)
- Implementing Linux Traffic Control to adjust allocation of Bandwidth to each device on the network
- Automate this Bandwidth control using Machine Learning and making it scalable to 100 or more devices

IntgrAi

Algorithm Developer Intern

Delhi, India
2022.02-2022.03

- Developed algorithms for efficient Options Trading using the Angel Broking API
- Automated the entire process, so it places order and sells it at the start and end of the day respectively
- Maximized daily profit by studying market trends in Option Trading

Script Winter of Code 2.0

Mentor

Remote, India
2021.11-2022.03

- Mentored beginners with Version Control on project Blood Buddy
- Blood Buddy is a website developed for easy blood donation during COVID-19
- Architected the base structure of the website

PROJECTS

- **Machine Learning based Fake News Detection(Natural Language Processing)** : Pulled out a dataset from kaggle.com and used it to detect the legibility of the news. The model I used was Logistic Regression, got accuracy about 91 percent
- **Euphoria- Stream music anywhere** : A static but fully responsive music web app made entirely with pure HTML, CSS, and JavaScript. The web app is made entirely with pure logic and no frameworks used.
- **IoT BASED TEMPERATURE AND HUMIDITY MONITORING SYSTEM FOR HILL STATIONS** : Architected a Temperature and Humidity Monitoring System using NodeMCU specifically constructed for tea estates and other plantations in the hill stations for accurate monitoring of essential parameters
- **Portfolio Optimization** : Using classical algorithms, specifically Efficient Frontier Method to find out an overall optimized portfolio.
- **Memristor Based Convolutional Neural Networks- Ongoing** : As part of my final year project, my team and I are working on materials which can be used as a Memristor, which eventually can be programmed externally to make neural networks by adjusting the bias and weights, progressing towards Associative Learning models.

SKILLS

Engineering

- **Programming Languages** - Python, Java, C, HTML(Markup Language), CSS(Style Sheets), JavaScript, Terraform(IaC)
- **Machine Learning Tools** - Numpy, Pandas, Matplotlib, Seaborn, Tensorflow, Pytorch, etc.
- **Web Dev Frameworks** - Reactjs, Django, Flask, Redux, Nodejs, Express, MongoDB, Mongoose
- **Electronics tools** - Matlab, Octave(Used for Digital Signal Processing)

General

- **Language Skills** - Bengali as mother tongue, fluent English and Hindi

PUBLICATIONS

A. Sanyal, P. Chowdhury, C. Ganguly, "IoT- based Wireless Real-time Temperature and Humidity Surveillance System for Hill Stations" [2021] Published at IEEE International Conference on Recent Trends in Computer Science and Technology (ICRTCST-2021)

A. Sanyal, S. Halder, T. Ghosh, "An Approach to Solve the N-Queens Problem using Artificial Intelligence Algorithm" [2022] Published at International Research Journal of Engineering and Technology (IRJET), Volume 9, Issue 9

EXTRACURRICULAR

- **Cycling** : Record of 54km cycling in 4 hours
- **Writer** : One publication in Native Language(Bengali)