

NILOTPAL SARKAR

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Summary — Dedicated Electronics and Communication Engineer with a passion for solving complex problems and advancing technology. Seeking internships to work with industry experts and research professionals. Currently Senior Year UG at ECE Deptt, IITK.

Skills

Tools/Software Multisim, Spice, Logisim, KiCad	Development Keil, Eclipse, VS Code, Flask, Git/Github
Hardware FPGA, Arduino, Raspberry Pi	Documentation MS Office, LaTeX, Sublime Text
Languages Python, C++ , HTML, CSS, MATLAB	Others Pandas, NumPy, Scikit-learn, Seaborn, Plotly,
OS Windows, Linux, Mac	Tableau, Keras

Experience

Indian Institute of Technology, Roorkee
Project Intern

Jun 2024 – Present

Synthesis and Design of RFID Antennas

- Analyze and optimize antenna parameters such as impedance matching, radiation pattern, gain, and bandwidth.
- Perform theoretical calculations to support antenna design and ensure alignment with project specifications.
- Analyze test data to evaluate antenna performance and identify areas for improvement.
- Document test procedures, results, and analyses to support project documentation and reporting.
- Assist in the preparation of research papers, presentations, and technical reports.

National Institute of Technology, Silchar
Wintern Research Intern (WRI)

Dec 2023 – April 2024

Design and Simulation of High-Frequency Semiconductor Devices for 5G Applications

- Utilize software tools such as TCAD and HFSS to design and model high-frequency semiconductor devices.
- Analyze device parameters such as cutoff frequency, power handling, linearity, and noise figure to ensure compliance with 5G standards.
- Use of ANSYS HFSS (High-Frequency Structure Simulator) to model the electromagnetic behavior of the device packaging and interconnects.
- Assist in the preparation of technical presentations and documentation for internal and external stakeholders.

Education

Indian Institute of Information Technology

Jul 2021 - Present

Bachelor of Technology in Electronics and Communications; GPA: 7.15

Courses: Statistical Signal Processing ; Information Theory and Coding ; Wireless Communications

Dr. Radhakrishnan School of Arts, Commerce and Science

Jun 2018 - Mar 2020

Higher Secondary [AHSEC Board]

Course: Science (Physics, Chemistry, Maths, Biology)

Projects

Sanjeevni/Health Web Application

Nov 2022 – Jan2023

- Designing a user-friendly interface tailored to the target audience and enhance data through preprocessing and augmentation.
- Development and deploy predictive models to meet user needs and optimize performance in production.

Distance Sensor

Sept 2023 – Nov 2023

- Development and selection of sensors, components, and program microcontrollers for real-time data processing to ensure object sensing accurate distance measurement.
- Analyzing sensor data, design algorithms for object detection and filtering, optimizing sensor performance and reliability.

Achievements

Google Cloud — AMD

Apr 2023

Worked on a project and developed a web application. Won the institute level of Solving for Indian Hackathon.

IRCTC Essay Competition

Sept 2017

Won the Best Essay Award at State Level from Indian Railways at High School.