NILOTPAL SARKAR

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Summary

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, IIITK.

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, Tableau, Keras
OS	Windows, Linux, Mac		

Experience

Indian Institute of Technology, Roorkee   Jun 2024 – Present
Project Intern

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   Dec 2023 – April 2024
Wintern Research Intern (WRI)

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, Kalyani   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

Sanzeevni/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.