NILOTPAL SARKAR

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Summary — Senior-year Electronics and Communication student at IIITK, passionate about solving complex problems and advancing technology. Actively seeking internships to collaborate with industry experts and research professionals.

Skills

Tools/Software	Multisim, Spice, Logisim, KiCad	**Development**	Keil, Eclipse, VS Code, Flask, Git/Github
Hardware	FPGA, Arduino, Raspberry Pi	**Others**	Pandas, NumPy, Scikit-learn, Seaborn, Plotly,
Languages	Python, C++, HTML, CSS, MATLAB		Tableau, Keras

Experience

Indian Institute of Technology, Roorkee   June 2024 – Present
Project Intern   *(Hybrid)*

Design and Synthesis of RFID Antennas

– Designed and simulated RFID antennas using HFSS tools.
– Optimized antenna performance by analyzing key metrics like return loss and gain.
– Collaborated with a research team, contributing to lab experiment reports, thesis work, and technical documentation on RFID antenna enhancements.

National Institute of Technology, Silchar   Dec 2023 – April 2024
Wintern Research Intern (WRI)   *(Remote)*

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

– Designed and modeled high-frequency semiconductor devices using TCAD and ANSYS HFSS to simulate device packaging and electromagnetic behavior of interconnects.
– Analyzed device parameters like cutoff frequency, power handling, linearity, and noise figure for 5G compliance, and assisted in preparing technical presentations, reports, and documentation.

District Computer Centre, Dibrugarh   Jul 2023 – Present
Teaching Assistant (T.A)   *(Hybrid)*

– Conducted interactive sessions and assisted in teaching programming, computer fundamentals, MS Office, and operating systems.
– Developed tailored lesson plans and materials, assessed student progress, and collaborated on teaching aids to ensure high-quality course delivery.

Education

Indian Institute of Information Technology, Kalyani   Jul 2021 - Present
Bachelor of Technology in Electronics and Communications
Courses: Statistical Signal Processing ; Information Theory and Coding ; Wireless Communications

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 as well as 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.