

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, Tableau, Keras
OS	Windows, Linux, Mac		

Experience

National Institute of Technology, Silchar <i>Wintern Research Intern (WRI)</i>	Dec 2023 – April 2024 <i>(Remote)</i>
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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.
- Assisted in preparing technical presentations, weekly reports, and documentation for both internal and external stakeholders.

District Computer Centre, Dibrugarh <i>Teaching Assistant (T.A)</i>	Jul 2023 – Present <i>(Hybrid)</i>
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- 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.
- Provided one-on-one mentoring and troubleshooting support, fostering collaboration and ensuring smooth lab sessions.

Education

Indian Institute of Information Technology, Kalyani <i>Bachelor of Technology in Electronics and Communications; GPA: 7.15</i> <i>Courses: Statistical Signal Processing ; Information Theory and Coding ; Wireless Communications</i>	Jul 2021 - Present
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Dr. Radhakrishnan School of Arts, Commerce and Science <i>Higher Secondary [AHSEC Board]</i> <i>Course: Science (Physics, Chemistry, Maths, Biology)</i>	Jun 2018 - Mar 2020
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Projects

Sanjeevni/Health Web Application	Nov 2022 – Jan2023
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- 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
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- 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
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Worked on a project and developed a web application. Won the institute level of Solving for Indian Hackathon.

IRCTC Essay Competition	Sept 2017
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Won the Best Essay Award at State Level from Indian Railways at High School.