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, IIITK.

Skills

Tools/Software Multisim, Spice, Logisim, KiCad
Hardware FPGA, Arduino, Raspberry Pi
Languages Python, C++, HTML, CSS, MATLAB
OS Windows, Linux, Mac

Development Keil, Eclipse, VS Code, Flask, Git/Github
Documentation MS Office, LaTex, Sublime Text
Others Pandas, NumPy, Scikit-learn, Seaborn, Plotly, Tableau, Keras

Experience

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

- 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 **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.
- Provided one-on-one mentoring and troubleshooting support, fostering collaboration and ensuring smooth lab sessions.

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 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.