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Hiring Manager
Mathworks

Dear Hiring Manager,

I am writing to express my interest in roles within the electronics domain, specifically in signal processing, embedded systems, SoC design, and control applications. I am currently pursuing a B.Tech in Electronics and Communication Engineering at the National Institute of Technology (NIT), Silchar, with a CGPA of 8.34. Through hands-on projects, internships, and coursework, I have cultivated a strong foundation in digital hardware design, embedded software, and signal processing techniques.

During my recent internship at **Bharat Heavy Electricals Limited (BHEL)**, I analyzed processor integration in CNC machines, gaining insights into embedded control systems. My academic projects include designing a high-speed **image processing SoC using the Zynq platform**, where I developed and integrated custom IPs for blurring and sharpening grayscale images with low-latency hardware acceleration.

I have also led the **RTL-to-GDSII flow** for a 32-bit pipelined RISC-V processor using **OpenLane**, gaining experience in ASIC physical design and verification (LVS/DRC). Additionally, I optimized FIR filters using Verilog and DSP techniques such as CSD and BCSE to reduce resource usage.

These experiences have deepened my understanding of **RTL design, SoC architecture, DSP, and embedded development**, supported by tools like **Vivado, ModelSim, VCS, Virtuoso**, and programming in **SystemVerilog, C/C++, Python**, and **Tcl**. I thrive in collaborative, technically challenging environments and am eager to contribute to projects at the intersection of hardware efficiency and intelligent processing.

Thank you for considering my application. I have also attached my resume and am happy to provide further documentation or discuss how I can contribute to your team.

Sincerely,
Mukesh