Rohit Shriram Joshi

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Dear Hiring Manager,

I hope this letter finds you well. With a strong foundation in VLSI design and computer architecture, coupled with research under Professor Nathaniel Bleier, optimizing matrix multiplication performance and resource utilization on radiation hardened FPGAs, I am excited to apply for the position of RTL Design Engineer at AheadComputing. As a Master's student in Electrical and Computer Engineering at the University of Michigan, Ann Arbor, I have cultivated the technical expertise and problem-solving skills essential for driving innovation in digital design.

My technical expertise is rooted in implementing complex digital systems through projects like a 2-way MIPS R-10K style out-of-order single-core processor and implementing hazard management in a 5-stage pipelined RISC-V processor. Currently, I am taking a physical design course, where the final project involves designing a 16-bit RISC microprocessor using Cadence Virtuoso. These experiences have equipped me with a deep understanding of RTL design, verification, physical design and system optimization, enabling me to handle both technical challenges and performance trade-offs effectively.

Here are some of the key qualifications that I believe make me a strong candidate:
- Proficiency in Verilog and SystemVerilog for RTL design and verification
- Strong understanding of computer architecture and VLSI design principles
- Proven ability to implement and debug complex digital systems, such as out-of-order superscalar processor
- Familiarity with electronic and electric circuit designs
- Excellent problem solving and analytical abilities
- Effective teamwork and communication skills

Your organization's commitment to contribute to groundbreaking designs and solutions resonates deeply with my aspirations. I am particularly drawn to the opportunity to be part of a team that values innovation and technical excellence while continuing to enhance my expertise in digital design.

Enclosed with the application is my resume, which provides further details about my academic and professional experiences. I would welcome the opportunity to discuss how my skills align with your team's goals and how I can contribute to the success of your projects.

Thank you for considering my application. I look forward to the possibility of joining your team and contributing to your innovative initiatives.

Sincerely,
Rohit Shriram Joshi