

Nrushad Joshi
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Dear Hiring Manager,

My name is Nrushad Joshi, and I am writing to apply for the HPC Engineer position at the Oak Ridge National Laboratory (ORNL). I graduated from Indiana University (IU) Bloomington on 05/04/2024 with a bachelor's in Intelligent Systems Engineering and a minor in mathematics. My internship experiences in HPC and coursework in programming languages like Python and C make me a competitive candidate for this position.

I participated in Purdue University's Summer Anvil Research Experience for Undergraduate program. At Purdue, I learned to operate clusters, execute benchmarks, and compile applications on a supercomputer. I benchmarked clusters' nodes with High-Performance Linpack (HPL) to assess CPUs' Floating-Point Operations Per Second (FLOPs) capabilities and to explore potential relationships between FLOPS and the number of nodes. I also benchmarked the storage system with IO500 and visualized the metadata and bandwidth metrics to ensure the storage system's resilience. I installed application kernels such as LAMMPS and HPCC to instantly detect malfunctioning cluster components and probable failure causes.

I enhanced my maintenance automation skills by fulfilling similar responsibilities during my second HPC internship at IU. My task was to accelerate maintenance efficiency by automating the execution of HPL and MMID Lattice Computation using the ReFrame Python library. For the cluster competition, I learned to execute the High-Performance Conjugate Gradient and MLPerf benchmarks and develop a Python environment to complete the reproducibility challenge related to the DaCe Python library. In addition, I founded and led the Supercomputing Club at IU to improve minority participation in the HPC domain, educate students about supercomputers, and prepare future members of the IU cluster competition team.

I have acquired the technical skills to carry out assigned duties effectively and excel in this position. In addition, I am an excellent leader, communicator, and problem-solver. If provided with the opportunity, I will prove myself valuable to the team and institution. Thank you for your time and consideration, and I look forward to hearing from you.

Sincerely,
Nrushad Joshi