

NAVEEN N RAVI

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SUMMARY

Professional Software Engineer with experience in the general areas of parallel and distributed computing. Specifically, my technical skills focuses in the following areas: (i) distributed parallel programming models and runtime systems for HPC (MPI and OpenSHMEM) and ML (NCCL/RCCL); (ii) parallel computing architectures, and (iii) high-speed network interconnects (HPE Slingshot and Infiniband).

EXPERIENCE

Hewlett Packard Enterprise (previously Cray, Inc)

Senior Systems/Software Engineer

Jan,2016 - present

Bloomington, MN

- HPC and ML communication runtime optimizations for HPE/Cray supercomputers and clusters
- Tech Lead for Cray programming environment software stacks including Cray MPI and Cray SHMEM
- Participate and represent HPE/Cray in OpenSHMEM and MPI standards committee

Cray, Inc

Intern

May,2015 - Dec,2015

Saint Paul, MN

- Research and prototype new communication protocols in Cray SHMEM library
- Optimize Global Arrays library for NAMD and NWChem Chemistry applications

University of Houston

Research Assistant - HPC Tools

Sep,2013 - May,2015

Houston, TX

- Research Assistant to Prof. Barbara Chapman
- Explore strategies for communication runtime optimizations for scalable parallel systems

EDUCATION

University of Minnesota, Twin Cities

Ph.D. in Computer Science

Aug,2022 - Present

University of Houston, Main Campus

M.S. in Computer Science - Specialization in Parallel & Distributed Systems

Aug,2013 - Dec,2015

Anna University, India

Bachelors in Engineering - Electrical & Electronics Engineering

Sep,2007 - May,2011

TECHNICAL STRENGTHS

Programming Languages

Parallel Programming Models & Libraries

Network Libraries

System Architectures

Architectures

C/C++, Python

OpenSHMEM, MPI, NCCL/RCCL, Coarray Fortran

Libfabric, UCX, Verbs

Aarch64, x86_64, GPU

HPE Cray Supercomputers & Clusters