

Prabhjyot Singh Saluja

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EDUCATION

University of Rhode Island

Master of Business Administration (MBA)

Providence, RI | **Graduated May 2025**

Brown University

M.S. Computer Science

Providence, RI | **Graduated May 2022**

Southwestern Oklahoma State University

B.S. Computer Science, Awarded Outstanding student for year 2017

Weatherford, OK | **Graduated May 2018**

COURSEWORK

Relevant Courses: Distributed Systems, Deep Learning, Machine Learning, Operating Systems, Database Management, Computer Vision, Data Science, Financial Accounting, Strategic Management, Supply Chain Management

PROFESSIONAL EXPERIENCE

Broad Institute of MIT & Harvard, HPC Principal Systems Engineer Cambridge, MA | October 2024 – Current

- Architected, deployed, and managed a hybrid cloud HPC infrastructure integrating on-premises and cloud resources (GCP) optimizing scalability, performance and cost
- Developed and implemented cost analysis and chargeback model for HPC compute, storage and cloud resources
- Collaborate with researchers to translate computational requirements into tailored HPC solutions
- Customized Backstage – an Internal Developer Portal (IDP) to organize projects in a centralized product catalog
- Deployed and managed containerized applications with Docker and Kubernetes, ensuring high availability
- Manage GCP resources using Kubernetes for cost savings and rapid deployments, using Terraform and Helm

Brown University, Lead Systems Engineer

Providence, RI | August 2022 – October 2024

- Provide system-engineering support for HPC cluster consisting of >500 nodes, 1000 GPUs and one-off VMs
- Maintain 4PetaByte Distributed Parallel filesystems (GPFS, Excelero NVMesh parallel NFS)
- Plan and carry out the deployment of various scheduler components (SLURM) such as QoS, Associations etc.
- Effectively integrated configuration management with XCAT & Puppet which ensured easy maintainability
- Perform security patching, upgrades, and monitoring and performing on-call duties across multiple time zones
- Participate in decision making process and conducting PoC evaluations for the procurement of new HPC systems

Brown University, Research Computing Consultant

Providence, RI | July 2019 – August 2022

- Responsible for maintaining the software stack and benchmarking applications. Automated builds with SPACK
- Maintain secure computing service (Stronghold) consisting of approximately 150 Linux and Windows Virtual machines on Hyper-V and VMWare, to meet NIST 800-53, HIPPA and GDPR compliance requirements
- Implemented Open OnDemand & Jupyter Lab on local cluster and on-cloud for individual classes
- Proactively met with users and research groups across campus and helped with code optimization

Purdue University, HPC Systems Administrator

Lafayette, Indiana | May 2018 - July 2019

- Provide engineering and systems-level support for HPC clusters used by researchers across various domains.
- Streamlined node repair process in the data center and reduced turnaround time by 75%
- Effectively integrated monitoring with Sensu and Splunk which ensured easy maintainability

TECHNICAL PROJECTS

Baldridge Project

Brown University | Jan 2023

- Led the Baldridge project, overseeing the replacement of the old legacy module system with the industry-adopted SPACK package manager to improve software delivery processes.
- Recognized for leadership and contributions to the project, receiving a trophy and first prize award.

SKILLS

Proficient Languages & skills: Bash, C, OpenMP, MPI, Python, Golang, SQL, CUDA, xCAT, GPFS, VAST, NVMesh, Puppet, SPACK, VNC, AWS, GCP, Docker, Sensu, Splunk, SumoLogic, MySQL, TensorFlow, PyTorch, JAX