Apoorve Mohan

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RESEARCH INTERESTS

- Broadly, my research interest comprises of Computer Systems and Networking with a recent focus on improving resource utilization in Bare Metal Clouds and HPC systems.

EDUCATION

Northeastern University

- Ph.D. Computer Engineering *(Advisor(s): Prof. Gene Cooperman)* — Present

University of Delhi

- M.Sc. Computer Science — Jul'11
- B.Sc. (Hons.) Computer Science — Jul'09

RESEARCH EXPERIENCE

IBM Research, T.J. Watson Yorktown Heights *(Research Intern)* — May'17 - Aug'17

- Project: Performance evaluation of Deep Learning Training workloads when riding on a disaggregated storage over shared commodity network. *(Advisor(s): Gheorghe Almasi, Marcio Silva, and Canturk Isci)*

Massachusetts Open Cloud, Boston University *(Graduate Research Student)* — May'15 - Present

- Papers
  - A. Mohan, A.Turk, R.S. Gudimetla, S.Tikale, J.Hennessey, U.Kaynar, G.Cooperman, P.Desnoyers and O.Krieger, "**M2: Malleable Metal-as-a-Service**" *(IC2E'18 - Acceptance Rate: 19%)*
  - A. Mohan, A.Turk, S.Tikale, M.Abdi, M.Hajkazemi, G.Cooperman, P.Desnoyers and O.Krieger, "**BareShala: A Platform where Bare Metal Clusters can Synergize**" *(In Progress)*
  - A.Mosayyebzadeh, A.Raza, J.Hennessey, G.Ravago, A. Mohan, S.Tikale, L. Rudolph, N.Schear, C. Munson, G.Cooperman, P.Desnoyers and O.Krieger, "**Bolted: Bare-Metal-Security as a Service**" *(In Progress)*
- Posters
  - A. Mohan, R.S. Gudimetla, A.Turk, S.Bollapragada, R.Kumar, J.Hennessey, E.Weinberg, D.Makrigiorgos, C.N.Hill, G.Cooperman, P.Desnoyers, R.Brower and O.Krieger, "**Marrying HPC and Cloud for Long Term Happiness**" *(Poster - SC'16)*
- Talks
  - A. Mohan, "**Marrying HPC and Cloud for Long Term Happiness**" *(2017 IBM Workshop on Architectures for Cognitive Computing and Datacenter)*
  - A. Mohan and S.Tikale, "**Elastic OpenStack Deployments**" *(OpenStack Summit Boston'17)*

HPC Lab, Northeastern University *(Graduate Research Student)* — Sep'14 - Present

- Papers
  - A. Mohan, R.Garg, D.Tiwari and G.Cooperman, "**Bulky: Improved Batch Processing in the Cloud**" *(In Progress)*
  - R. Garg, O. Ndayishimiye, A. Mohan M. Sullivan and G. Cooperman, "**CRUM: Checkpoint-Restart Support for CUDA's Unified Memory**" *(In Progress)*

OTHER WORK EXPERIENCE

Indian Institute of Technology, Delhi *Research Associate* — Dec'12 - Aug'14

- Project: Creation of Common Computing Platform AKA Baadal (RP02595) - An open source cloud platform that provides IaaS for different academic institutions across India. *(Advisor(s): Prof. Sorav Bansal, and Prof. Huzur Saran)*

Maharaja Agrasen College, University of Delhi

- Guest Lecturer — Jan'13 - Dec'13
  - Undergraduate: MIPS and C Programming
- Assistant Professor *(Adhoc)* — Sep'12 - Dec'12
  - Undergraduate: Shell and C Programming

One97 Communications Ltd., NOIDA

- Software Developer *(Full-Stack Development)* — July'11 - Sep'12

TECHNICAL EXPOSURE

• **Programming:** C, Python, Shell Script, OpenMP, OpenMPI, CUDA • **Virtualization:** KVM, QEMU, Libvirt • **Storage:** Ceph, TGT/IET iSCSI target • **Deep Learning:** Caffe (Imagenet+Alexnet) • **Databases:** MySQL, SQLite, PostgreSQL • **Web:** Web2py, JavaScript, HTML, CSS, JQuery