

SUMMARY

- Currently pursuing PhD in Computer and Information Science at Temple University.
- Research area focuses on Quality of Service (QoS) provisioning in data center. Specific research interest includes **distributed storage, high performance computing, software defined network**.
- 2+ years of professional experience in implementing highly scalable, resilient and secure messaging services, as a developer and later as a technical team lead.
- 1+ years experience in implementing protocols and developing billing solutions in telecommunication industry.

EDUCATION

- **Temple University** Philadelphia, PA
PhD in Computer and Information Science. Advisor: Dr. Krishna Kant, PhD *Aug. 2016 — Dec. 2021(Expected)*
- **Bangladesh University of Engineering and Technology** Dhaka, Bangladesh
Bachelor of Science in Computer Science and Engineering *Jan. 2008 — March. 2012*

WORK EXPERIENCE

- **Kioxia**
Computational Storage Research Intern *June. 2021 — August 2021*
- **Appdragon**
Software Development Team Lead *Sept. 2015 — Jul. 2016*
- **Appdragon**
Senior Software Development Engineer *May 2014 — Sept. 2015*
- **Reve Systems**
Software Development Engineer *Mar. 2013 — May 2014*

GRADUATE RESEARCH (DETAILS IN WEBSITE)

- **Provisioning QoS in Distributed Storage Infrastructure:** Coordination between different layers of network and storage stack to achieve the system defined QoS in NVME-OF and PM-OF environment.
- **Resource Management for Hyper-Converged Network:** Devising methods to alleviate the bandwidth bottleneck - introduced by hyper-convergent network in high performance distributed storage system.

PROFESSIONAL PROJECTS(COMPLETED)

- Co-developed and later led *SmartMessage*, a highly scalable and asynchronous web messaging application addressing C10K issue. Currently being provided by *Appdragon* for secured and convenient messaging services. Developed using **Tornado, Celery, SQLAlchemy and RabbitMQ**.
- Developed automated incremental database backup and point in time Recovery facility of the production billing databases. Administrators could backup/restore the DB instantly and monitor the status via a web interface. Developed using **standard java libraries** and **MySQL utilities**.

SKILLS

- **Languages and Scripts:** C/C++, Python, Java, Scala, Perl
- **Frameworks:** Hadoop, Spark, Pig, Omnet++, *ns3*, SPDK, DPDK, Tornado
- **Others:** Git, Linux System Configuration, Benchmarks (HiBench, TPCC)

- [1] **Quality of Service (QoS) Aware NVMe over Fabrics Solution in Data Center Network - Joyanta Biswas**, Krishna Kant, Amitangshu Pal, and Dave Minturn. (LCN '21)
- [2] **Coordinated Power Management in Data Center Networks - Joyanta Biswas**, Madhurima Ray, Sanjeev Sondur, Amitangshu Pal, and Krishna Kant. Sustainable Computing (SUSCOM '19)
- [3] **Adaptive Data Center Network Traffic Management for Distributed High Speed Storage - Madhurima Ray, Joyanta Biswas**, Amitangshu Pal, and Krishna Kant. Local Computer Networks (LCN '19)
- [4] **Opportunistic Power Savings with Coordinated Control in Data Center Networks - Madhurima Ray, Sanjeev Sondur, Joyanta Biswas**, Amitangshu Pal, and Krishna Kant. In Proceedings of the 19th International Conference on Distributed Computing and Networking (ICDCN '18)