MUHAMMAD HASEEB

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EDUCATION

Ph.D. Computer Science

Sept. 2021 - May 2026 New York University, New York, USA Research Focus: Distributed Systems, Networks, Cloud Computing, Microservices, Financial Technologies GPA: 4.0/4.0

Bachelor of Science, Computer Science

Lahore University of Management Sciences (LUMS), Lahore, Pakistan GPA: 3.69/4.0

PROFESSIONAL EXPERIENCE

Networking Research Intern

Nokia Bell Labs, Murray Hill, New Jersey

- Led a project for designing and developing a streaming service for AR/VR content •
- Developed a resource-efficient and scalable streaming system for volumetric videos
- Developed an encoder/decoder for point cloud data that can tolerate packet losses

Software Engineer (Full Time)

PosterMyWall, Lahore, Pakistan

- Designed and implemented an access control system for different tools of the company •
- Setup CI/CD pipeline along with testing infrastructure using TeamCity and AWS
- Automated and maintained AWS-hosted development infrastructure
- Secured the product website by eliminating critical vulnerabilities (XSS, CSRF, IDOR)
- A recommendation letter from my manager is available on my LinkedIn profile

RESEARCH PROJECTS

High-performance and scalable multicast for cloud-hosted financial exchanges [Link]

- Designed and implemented a low-latency, scalable, and fair multicast service •
- Used kernel-bypass techniques (DPDK) for achieving ultra-low latency
- Achieved better latency and scalability than the multicast provided by AWS Transit Gateway

Fast, expressive, and cheap analytics for distributed traces using cloud storage [Link]

- Developed a data management system atop cloud storage for distributed tracing data
- Devised storage indices specialized for querying traces based on their graph structures
- Achieved 60% better query performance than Grafana Tempo

Patent: A Method To Enable Fast Transmission And Processing Of 3D Telepresence Data Encoded As Octrees (Approved by Nokia's internal board, In submission to USPTO)

Award: Outstanding Student Research Award By Nokia Bell Labs, Awarded during Global Student Program 2023 for my work on a scalable VR (Virtual Reality) streaming service

Skills: C/C++, Python, Go, Rust, Javascript, Kernel Bypass (DPDK, XDP), Systems Design GitHub: https://github.com/HaseebLUMS

June 2023 – August 2023

June 2020 – August 2021

Sept. 2016 - May 2020