MUHAMMAD HASEEB

Manhattan, New York | (646) 240-6375 | mh6218@nyu.edu
https://haseeblums.github.io

EDUCATION

Ph.D. Computer Science **Sept. 2021 – Present**
New York University, New York, USA
Research Focus: Distributed Systems, Microservices' Observability & Security, Computer Networks
Advisor: Anirudh Sivaraman
CGPA: 4.0/4.0

Bachelor of Science, Computer Science **Sept. 2016 – May 2020**
Lahore University of Management Sciences (LUMS), Lahore, Pakistan
CGPA: 3.69/4.0

EXPERIENCE

Software Engineer at PosterMyWall **June 2020 – August 2021**
- Secured the product website by eliminating critical security vulnerabilities (XSS, CSRF, IDOR, potential Brute Force Attacks)
- Designed and implemented an access control system for different tools of the company
- Setup CI/CD pipeline along with a testing infrastructure
- Created a disaster recovery mechanism for the company's infrastructure hosted on AWS
- Worked with various AWS services: EC2, S3, CloudFormation, CloudWatch, CodeDeploy

PROJECTS

Data Management System For Data Generated By Distributed Tracing Systems
- Implemented a data management system that uses cheap cloud storage for storing trace data
- Devised indices specialized for querying traces based on their graph structures
- Achieved query latency 60% better than the state-of-the-art distributed tracing systems
- Used C++, Golang, GCP, Kubernetes, Bazel, OpenTelemetry

Service Mesh Based Microservices Authorization For Byzantine Environments
- Designed a new access control system, Path Aware Access Control that takes into account the path a user request follows in a microservices application before allowing it to access some microservice(s)
- Worked with Istio Service Mesh, Kubernetes, Rust, C++, Static Program Analysis, GCP, GKE

Khata Mobile Application | Software Engineering Project
- Android/iOS application for maintaining daily monetary transactions between a group of users
- Won an award for excellence in UI/UX and Code Quality
- Used React Native, Firebase

RESEARCH PAPERS

To Block or Not To Block: Accelerating Mobile Webpages On-The-Fly Through JavaScript Classification
ICTD 2022 (Presented the paper in Seattle, Washington) | [Link]

Using Application Layer Banner Data To Automatically Identify IoT Devices
ACM Sigcomm CCR 2020 | [Link]

GitHub: https://github.com/HaseebLUMS