# Wasiq Noor Ahmad Qasmi

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## EDUCATION

**Lahore University of Management Sciences**                     2017 - 2019

   Master of Science in Computer Science; CGPA: 3.41

<u>Relevant Courses:</u> Applied Probability, Design and Analysis of Algorithms, Distributed Systems, Network Security

**University of Bradford**                     2012 - 2016

   Bachelor of Science in Computer Science; CGPA: 4.00

<u>Relevant Courses:</u> Cyber Security, Data Structures and Algorithms, Database Systems, Neural Networks and Fuzzy Systems

## EXPERIENCE

**Educative**                     Aug 2020 - Present

Software Engineer

○ Responsible for implementing new features like personalized coding environments for 0.5 million users.

○ Implemented and maintained the pipeline for the blog service for the platform.

**Zong Research Lab, Lahore University of Management Sciences**                     Sep 2018 - May 2020

Research Assistant

○ Implemented Control Traffic Aggregator for fast packet processing at 10Gbps using kernel bypass via DPDK.

○ Implemented load-balancing and fault tolerance using consistent hashing among geographically distributed nodes.

○ Encoded cellular messages using a new serialization scheme, FlatBuffers, to improve the serving rate by up to $10\times$.

**Cloud Computing Research Lab**                     Jun 2016 - Mar 2017

Research Assistant

○ Implemented a Disaster Recovery (DR) solution for OpenStack, that could recover the user's state within 3 seconds.

○ Designed and tested the DR solution over the AWS and recovered EC2 instances in Australia and USA under disaster situation.

## PUBLICATIONS

- **A Low Latency and Consistent Cellular Control Plan**: SIGCOMM 2020, New York, USA
- **Fast EPC: A Low Latency Cellular Control Plane**: SIGCOMM 2019, Beijing, China

## PROJECTS

- **Cellular Security (C/C++)**: Developed and executed 4 new cyber security attacks for LTE networks. These attacks were then benchmarked to measure the impact, which resulted in delayed responses by up to $40\times$.
- **Bitcoin Miner (Golang)**: Implemented a fault-tolerant and concurrency safe bitcoin miner employing cryptographic functions among distributed nodes included a front-end load-balancer to reduce the completion time.
- **Censorship Analysis of Google (Python)**: Categorized and detected Google auto-suggestions are biased and potentially censored based on the user's current location.
- **Fuse File System (Python)**: Developed a new file system for Linux using FUSE and LevelDB that was able to perform $10\times$ faster than the traditional ext4.
- **Serendipity (Python)**: Developed a distributed file system, like Google File System, for private cloud deployments with different access levels and failure recovery protocols.
- **DRaaS (Python)**: Build a protocol as a service for detection of disastrous failures in large data-centers which would provide services to users from alternate recovery points.

## PROGRAMMING SKILLS

**Languages**: Proficient in C/C++ Golang and Python. Prior experience in Rust, Java and SQL

**Technologies**: DPDK, AWS, Google App Engine, Git

## AWARDS AND CERTIFICATES

Winner Speed Programming Competition 2015, 2016                     Microsoft Certification in Programming with C#