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

Relevant Courses: Applied Probability, Design and Analysis of Algorithms, Distributed Systems, Network Security, Topics in Internet Research

University of Bradford 2012 - 2016

Bachelor of Science in Computer Science; CGPA: 4.00

Relevant Courses: Cyber Security, Data Structures and Algorithms, Database Systems, Neural Networks and Fuzzy Systems

Experience

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×.

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.

PLUMgrid (now acquired by VMware) Aug 2015 - Sep 2015

Intern

- Experienced the OpenStack APIs for services like load-balancing and firewalls.
- Implemeted a new service for monitoring of cloud resources.

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×.
- **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× 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.
- **Breast Cancer Detection**: Developed a neural network for the detection of breast cancer from samples available by UCI Repository with accuracy up to 92%.
- **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#