

Zeeshan HAKIM

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EDUCATION

2012-2016 | **Lahore University of Management Sciences (LUMS)**
BS in Computer Science
Graduate-level courses: Topics In Internet Research, Computer Networks, Network Security, Service-Oriented Computing, Human Computer Interaction, Intro to Data Mining

RESEARCH PROJECTS

CURRENT | **Priority Aware Load Balancing For Flow Scheduling Algorithms in Failure Scenarios**
Working as a Research Assistant under [Dr. Ihsan Ayyub Qazi](#) (PhD, University of Pittsburgh) on a project that investigates the load balancing strategy for flow scheduling algorithms especially under failure scenarios given the priority of flows. Currently, I am evaluating state-of-the-art datacenter transport strategies on a real testbed.

SUMMER 2016 | **Transport Protocol Performance under Varying Workloads**
Worked with [Dr. Ihsan Ayyub Qazi](#) and [Dr. Zartash Afzal Uzmi](#) (PhD, Stanford University) on a project that analyzed variations in workloads in modern day datacenters. I conducted evaluations in NS-2 using various standard and synthetic workloads with respect to tail variations. Moreover, I helped create a workload adaptive framework capable of switching between different scheduling schemes while proactively learning the workload variation.

FALL 2015 | **Virtual Machine Introspection Framework**
Worked with [Dr. Basit Shafiq](#) (PhD, Purdue University) on my undergraduate thesis which focused on detection of cyber-attacks using Virtual Machine Introspection. The motivation was to identify attacks in a network of physical machines running several virtual machines. My contributions were analyzing memory dumps using 'Volatility Framework', writing scripts for automation of attacks on VMs as well helping in developing a framework which allowed a central node to identify the infected VM by analyzing logs from different machines.

OTHER PROJECTS

FALL 2016 | **LUMS vTOUR**
Worked with [Dr. Suleman Shahid](#) (PhD, Tilburg University) to create a 3D model of LUMS for HCI course project. This model was used to create a virtual tour of our campus using Oculus Rift. This project followed a User-Centered Design and was built using Leica's Laser Scanner, 3ds Max and Unity 3d.

WORK EXPERIENCE

CURRENT | **Research Assistant**
Advisor: [Dr. Ihsan Ayyub Qazi](#) (Assistant Professor, LUMS)

SPRING 2016 | **Teaching Assistant- CS 315: Theory of Automata**
Worked as a Teaching Assistant for [Dr. Hamad Alizai](#). I prepared and graded quizzes and assignments, conducted weekly tutorials and aided students in course projects.

TECHNICAL SKILLS AND TOOLS

I have good understanding of network simulation tools like NS-2. I also have good grip on socket programming in various languages such as C/C++ and Java. Currently, I am exploring Linux Network Stack as well as SDNs (specifically OVS). Moreover, I also have experience in database management and scripting languages such as Python, Bash, Perl.

AWARDS AND HONORS

- 2nd Position for Blood For Life Application in [Lahore Civic Hackathon](#) at LUMS, Lahore
- 3rd Position for DNA Matching Engine at [ITEC](#) in NED-UET, Karachi