

Awais Chishti | CV

Nationalities: USA, Pakistan

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🔗 <https://github.com/phymod0>

Education

Bachelor of Science in Computer Science
CGPA: 3.640/4.0 (unofficial transcript [here](#))

Lahore University of Management Sciences
2015 ⇒ 2019 (expected)

Notable projects

Open source

- [Ported](#) a tool for intercepting HTTPS/SSL connections ([SSLsplit](#)) to the OpenWrt platform (an embedded firmware mainly for wireless routers).
- VLC contributor: [Patched](#) and [identified](#) errors in the VLC source code.

Academic

MegaVM | July 2017 ⇒ Now, Lahore University of Management Sciences

(Increasing VM performance by enabling a hypervisor to leverage the resources of multiple machines)

- Wrote kernel modules managing page faults to coordinate page accesses in a network of machines.
- Provided a consistent abstraction of shared virtual memory to processes running on different physical hosts.
- Fixed memory-related issues in a separate module of the project for distributing memory over RDMA.

Program Analysis project | Oct ⇒ Dec 2017, Lahore University of Management Sciences

(Reducing the image size and attack surface of an embedded OS for predefined hardware platforms)

- Wrote LLVM passes to guess platform-dependant function inputs and to hard-code them for optimization.
- Reduced [Contiki OS](#) by approximately 100 ROP gadgets and 5% of its image size, preserving functionality.

Personal

- Added functionality to [hostapd](#) for collecting EAP hashes of nearby wireless stations. Achieves better efficiency than a similar [well-known patch](#) by first deauthenticating stations from discovered access points.
- Offline lightweight [web application](#) for wireless routers to manage the attendance of connected people.
- [Tool](#) to deauthenticate wireless stations from access points with spoofed management frames.
- [DNS interceptor](#) for routers to monitor links visited by clients and upload them to a configured server.

Skills

Technical

- Good command of C developed over 7+ years. Experience with C++, Linux kernel programming, Python and Vim. Developed multiple packages for wireless routers flashed with OpenWrt.

Achievements

Competitive programming

February Circuits '19

Rank 20 among 9,000+ contestants

HackerEarth

February 2019

March Challenge 2019

Rank 33 among 12,500+ contestants

CodeChef

March 2019

Olympiads

56th International Mathematical Olympiad

Bronze Medal

Chiang Mai, Thailand

2015

55th International Mathematical Olympiad

Bronze Medal

Cape Town, South Africa

2014

XXVI Asian Pacific Mathematical Olympiad

Bronze Medal

2014