

Mohamed E. Najd

PHD STUDENT @ UNIVERSITY OF CONNECTICUT

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Experience

University of Connecticut. CSE Department

GRADUATE ASSISTANT

- Conducting academic research in the fields of theoretical and applied cryptography and cybersecurity

Storrs, CT, United States

Aug. 2022 - Present

Cloud Software Group / Citrix

STAFF SOFTWARE ENGINEER

Citrix Systems, Inc

Apr. 2022 - Aug. 2022

Burlington, MA / Remote United

States

Jul. 2017 - Aug. 2022

SENIOR SOFTWARE ENGINEER II

Citrix Systems, Inc

Apr. 2020 - Mar. 2022

SENIOR SOFTWARE ENGINEER I

Citrix Systems, Inc

Jul. 2017 - Apr. 2022

SOFTWARE ENGINEER II

- Software Engineer, with cyber security background, working on the software developed by the WinApp Delivery Group at Citrix Systems Inc.
- Participated in improving the Citrix Machine Creation Services (part of the Citrix Virtual Apps and Desktops product) on Azure. Languages Used: C#
- Developed the initial design for the Citrix Connector Appliance for cloud services and its components. Languages used: Python/CPython, C. Tools: Buildroot/Linux, Docker
- Designed and developed several improvements on Citrix Provisioning Services (part of Citrix Virtual Apps and Desktops product). Languages Used: C#, C++, python. Protocols used: Custom protocol on top of UDP
- Interfaced with the product security team and reviewed policy compliance for different products developed at Citrix's Boston offices. (Threat modeling, SOC2 Compliance).

100, Institute Road, Worcester, MA,

United States

Aug. 2015 - May 2017

Worcester Polytechnic Institute, CS Department

RESEARCH ASSISTANT

- Investigated methods to enhance enterprise network security using concepts from the software-defined networking paradigm. Work included modifying the network stack in the linux kernel, integrating Open vSwitch as the main network interface and connecting to a Pox/Floodlight SDN controller
- investigated the feasibility of cloud-hosted software-defined networking servers that would allow managing and securing residential networks. This project was done by building a measurement interface and proxying using PHP.
- Researched methods to isolate specific traffic and protect it against known attacks, and applied it to the skype protocol. Work done using ufw/iptables and a POX SDN controller

Al Akhawayn University in Ifrane

UNDERGRADUATE TEACHING ASSISTANT

- Helped professors with management of their classes. This included grading, tutoring and reviewing class content.
- Classes: Physics I - Object Oriented Programming - Computer Architecture - Operating Systems - Computer Networks

Avenue Hassan II, Ifrane, Morocco

Aug. 2011 - Dec. 2014

N+ONE Datacenters

DATACENTER ENGINEER INTERN

- Developed an Infrastructure as a Service (IaaS) self-provisioning platform based on Apache Cloudstack using JEE and AJAX.
- Performed data center operations: Adding new machines, managing VMs, maintaining servers.

2, Rue Lakrari, Casablanca, Morocco

May 2013 - Aug 2013

Freelance

DEVELOPER / PROJECT MAINTAINER

- Worked as a Freelance computer programmer for different organizations/entities.
- Maintained UbuDSL (a network configuration tool) for ADSL Modems (details at: <https://launchpad.net/~ubudsl-maintainers>).

Morocco

2008 - 2010

Skills

Programming

C/C++, C#, Python, PHP, Java, JavaScript, Lua, Go

Systems

Linux, Windows, OSX/MacOS, BSD

CS Skills

Kernel and Network Programming, Shell Scripting, Infrastructure deployment and monitoring, Network Traffic Analysis, Azure, GCP, Penetration testing

Databases

MySQL/MariaDB, MongoDB, PostgreSQL, Cassandra, SQLite

Languages

English, French, Arabic

Education

University of Connecticut

PH.D. STUDENT

- Research Interests: Theoretical and Applied Cryptography, Blockchain, Cybersecurity
- Sponsored through a Graduate Assistantship.
- Member of the CSSL Lab.

Storrs, CT
Aug. 2022 - Present

Worcester Polytechnic Institute, (WPI)

MASTER OF SCIENCE IN COMPUTER SCIENCE

- Research Interests: cybersecurity, network security, network performance.
- Sponsored through a Research Assistantship.
- Member of the Applied Logic and Security (ALAS) and Performance Evaluation of Distributed Systems (PEDS) research groups.

100 Institute Road, Worcester, MA,
United States
Aug. 2015 - May 2017

Al Akhawayn University in Ifrane, (AUI)

BACHELOR OF SCIENCE IN COMPUTER SCIENCE, MINORS IN MATHEMATICS AND COMMUNICATION STUDIES

- An ABET Certified undergraduate programme providing the student with theoretical knowledge of Computer Science.
- Valedictorian of School of Science and Engineering - Class of 2015.

Avenue Hassan II, Ifrane, Morocco
Aug. 2010 - Dec. 2014

Honours & Awards

GRADUATE

2023 **Synchrony Fellowship**, University of Connecticut/Connecticut Advanced Computing Center Storrs, CT, USA

PROFESSIONAL

2020 **Winner**, Trend Micro Capture The Flag event at Citrix Systems Burlington, MA, USA

UNDERGRADUATE

2015 **Valedictorian**, Al Akhawayn University in Ifrane - School of Science and Engineering (CGPA 3.92) Ifrane, Morocco
2010 - 2014 **AUI Excellence Scholarship**, Al Akhawayn University in Ifrane Ifrane, Morocco

Publications

- 2016 **Whole Home Proxies: Bringing Enterprise-Grade Security to Residential Networks**, Curtis R. Taylor, Craig A. Shue, Mohamed E. Najd IEEE ICC 2016, Kuala Lumpur, MY
- 2017 **DeepContext: An OpenFlow-Compatible, Host-Based SDN for Enterprise Networks**, Mohamed E. Najd, Craig A. Shue IEEE LCN 2017, Singapore, SG
- 2017 **On the Feasibility of Cloud-Based SDN Controllers for Residential Networks**, Curtis R. Taylor, Tian Guo, Craig A. Shue, Mohamed E. Najd IEEE SDN-NFV 2017, Berlin, DE
- 2024 **chainBoost: A Secure Performance Booster for Blockchain-based Resource Markets**, Zahra Motaqy, Mohamed E. Najd, Ghada Almashaqbeh IEEE EuroS&P 2024, Wien, AT

Interests

Research Cryptography, System and Network Security, Software-defined Networking, Network Performance