Md Ali

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Summary

Dynamic Cybersecurity Consultant with expertise in penetration testing and governance, risk, and compliance (GRC) practices across diverse sectors, including healthcare, education, and finance. Proven ability to conduct thorough pen-testing engagements and implement robust security measures to protect client assets. Cybersecurity Faculty & Program Coordinator at Olive-Harvey College, overseeing curriculum development while instructing courses to foster the next generation of cybersecurity professionals. Skilled instructor at ThriveDX, specializing in offensive security, defensive operations, and GRC principles. Fluent in English, Russian, and Bengali, with working proficiency in Tagalog and actively pursuing proficiency in Chinese. Passionate about continuous learning and staying at the forefront of cybersecurity trends.

Work Experience

Cybersecurity Consultant – Burwood Group Inc. Aug 2022 - Present

- Spearheading pen-testing engagements for 20+ clients annually across diverse industries, leveraging Kali Linux to conduct comprehensive assessments of 1000+ servers, machines, and devices across various environments, including external and internal networks, web applications, and physical security measures.
- Providing expert guidance and support in GRC policy development and implementation, ensuring compliance with NIST, HIPAA, and PCI. Conducting 25+ Security Risk Assessments (SRAs) annually, proactively identifying and mitigating security threats, leading to an average 30% risk reduction in client environments.
- Engaging with clients across healthcare, education, and finance, delivering tailored consulting services and integrated cybersecurity solutions. Executed multiple vulnerability assessments and penetration tests, ensuring a 95% remediation rate through effective risk management and mitigation strategies.

Cybersecurity Faculty & Program Coordinator – Olive-Harvey College Aug 2024 - Present

- Developed and led cybersecurity curriculum for 100+ students annually, aligning coursework with industry certifications like CompTIA Security+ and OSCP.
- Taught and mentored students in cybersecurity, achieving a 85%+ student pass rate on industry certification exams and helping graduates secure jobs in cybersecurity roles.
- Collaborated with faculty and industry partners to enhance program offerings, integrating 40+ hands-on labs and real-world simulations to improve student engagement and job readiness.

Cybersecurity Instructor – Thrive DX Nov 2022 - Present

- Delivering remote instruction on a range of cybersecurity topics, including ethical hacking, game theory, network security, Python, Linux security, cloud security, and digital forensics incident response. Utilizing dynamic and interactive teaching methods to ensure students receive comprehensive training and acquire essential skills for success in the cybersecurity field.
- Demonstrating extensive expertise in the latest security protocols and technologies, covering areas such as network access control, device management, whitelisting solutions, mail relays, endpoint protection, incident response (IR), disaster recovery (DR), and social engineering. Providing students with practical insights and real-world examples to enhance their understanding of cybersecurity concepts and applications.

Adjunct Professor – Illinois Institute of Technology Aug 2023 - Aug 2024

- Instructing both undergraduate and graduate students in object-oriented programming and system security, drawing upon my expertise in computer science to develop comprehensive curricula that encompass a variety of programming languages and techniques.
- Providing personalized mentorship and guidance to students, offering one-on-one support to help them navigate challenges in their coursework. Committed to fostering a collaborative and supportive learning environment that empowers students with the technical skills and critical thinking abilities essential for success in their future careers.

Adjunct Professor – Saint Louis University Jan 2024 - May 2024

- Adjunct Professor at the School for Professional Studies, specializing in teaching courses within the Computer Information Systems curriculum, with a strong focus on Cybersecurity.
- Deliver instruction virtually to a diverse student body, including individuals from various geographic locations worldwide and the greater Saint Louis Area.
- Design and develop engaging curricula tailored to the needs of students, incorporating innovative teaching methodologies and real-world examples to enhance learning outcomes. Provide personalized support and mentorship to students, assisting them in overcoming challenges and fostering a collaborative learning environment conducive to their academic success.

Research Aide – Argonne National Labs May 2022 - Aug 2022

- Collaborated with Dr. Yuri Alexeev on groundbreaking research aimed at optimizing tensor contraction methods, leveraging the QTensor quantum simulator at Argonne National Laboratory.
- Developed a parallel optimizer in Julia to identify optimal tensor contraction sequences for complex computational problems running on Polaris and Aurora supercomputers.
- Presented research findings and analyses in a Jupyter notebook, with a focus on identifying optimal tensor contraction sequences for quantum supremacy Sycamore and QAOA quantum circuits, ultimately contributing to advancements in quantum computing technology.

Research & Teaching Assistant – Illinois Institute of Technology Aug 2019 - May 2022

- Conducted research in the HExSA labs under the guidance of Dr. Kyle Hale, focusing on distributed computing, operating systems, and programming languages. Emphasized dynamic environments with remote cores, particularly in edge computing cases. Utilized programming language techniques and custom virtual machines to simulate dynamic networks and calculate costs using the Sniper platform for Coalescent Computing.
- Collaborated with Dr. Stefan Muller on research involving Worst Case Execution Time (WCET) analysis using tools such as OTAWA and RAML to analyze ARM binaries with OCaml programs. Developed methods for generating code execution timing approximations in higher-level languages such as Python and C++, streamlining program verification processes and reducing manual errors.
- Explored dynamic environments in edge computing, employing programming language techniques and virtual machines to simulate real-world scenarios. Utilized custom interpreters and stack machines to calculate costs, contributing to ongoing efforts to enhance edge computing technologies.
- Served as a Teaching Assistant for "Data Networks and the Internet" during the Fall 2020 and Spring 2020 semesters. Responsibilities included grading, evaluating, and lecturing on network design, theory, and implementation. Demonstrated expertise in various network topologies, TCP/UDP ports, and the OSI model.
- Assisted as a Teaching Assistant for "Enterprise Server Admin" during the Spring 2020 semester. Duties involved grading, evaluating, and lecturing on Windows 2012/R2 servers, including setup, implementation, and troubleshooting procedures.

Undergraduate Researcher & Lab Instructor – Texas State University May 2016 - May 2019

– Developed a C++ program to model the decay of cube satellites in the atmosphere, enhancing understanding of orbital dynamics. Designed and implemented a user-friendly GUI interface for the program. Facilitated weekly meetings to discuss project progress and explore relevant astrophysical phenomena impacting cube satellite trajectories.

– Led introductory physics labs 1 and 2, guiding students through hands-on experiments and activities covering mechanics to electrodynamics concepts. Responsible for grading assignments and delivering engaging lectures to reinforce fundamental physics principles.

Undergraduate Research Fellow – EUCOS Aug 2016 - Aug 2019

– Published a research paper investigating general relativistic invariants of black holes, wormholes, and the Alcubierre metric. Analyzed FORTRAN code and translated it into C++ and Python, verifying results through manual tensor calculations. Presented detailed mathematical models and proofs in the publication.

– Conducted research on negative probabilities and quasi-distributions, utilizing R simulations, particularly with the gold slit experiment. Applied quantum mechanics principles to statistically evaluate the probability of a proton passing through both slits. Presented the model to a panel of research professors for approval, securing funding for independent research.

Education

Capitol Technology University • Laurel, MD January 2023 – May 2025
Doctor of Philosophy • *Computer Science*

Illinois Institute of Technology • Chicago, IL August 2020 – December 2022
Masters of Science • *Computer Science*

Illinois Institute of Technology • Chicago, IL June 2019 – August 2020
Masters of Science • *Applied Cybersecurity & Digital Forensics*

Texas State University • San Marcos, TX August 2015 – May 2019
Bachelor of Science • *Physics & Applied Mathematics*

Volunteer Experience

– Volunteering Services for Chicago's Alderman Andre Vasquez

– ACM SIGPLAN Conference on Systems, Programming, Languages, and Applications: Software for Humanity Student Volunteer

– Women in Cybersecurity (WiCys) Mentor

Achievements & Talks

– Guest Speaker on "Offensive Cybersecurity" at Corporate Strategy podcast 2024

– Speaker on "Navigating the Shadows: Unraveling the Depths of the Internet, Dark Web, and Tor Network in the Realm of Cybersecurity" at OWASP SnowFroc Colorado 2024

– Guest Lecturer on "Ethical Hacking" at the University of Texas at Dallas 2021

– Sigma Pi Sigma Physics National Achievement Award 2019

– Mathematics Excellence Award at Texas State University 2019

– Sigma Pi Sigma Physics National Honor Society Member since 2019

– Mathematical Association of America Member since 2019