Zacharia Kornas

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As an Informatics student at the University of Washington focusing in cybersecurity, I am passionate about fostering a culture of security awareness and empowering individuals with the knowledge and skills to protect against digital threats.

EDUCATION

University of Washington, Seattle, WA
Dean's List, 3.9 GPA
Bachelor of Science, Major: Informatics
Relevant Courses: Foundations of Programming I/II, Data Science Foundations, Client-Side Development, Information Assurance and Cybersecurity, Information Ethics and Policy, Data Structures and Algorithms, Networking and Distributed Systems, Data Science I, Databases and Data Modeling.

SKILLS

Programming Languages: Java, Python, Javascript, PHP, HTML, CSS, and R.
Technologies: Metasploit, Nmap, ZAP, Wireshark, Node.js, Docker, Azure, Git/GitHub, Postman, STRIDE, Linux.
Concepts: Object-oriented design, Software Development Life Cycle, TCP/IP and Networking Fundamentals, Risk Management, MITRE ATT&CK Matrix, PCAP Analysis, NIST Cybersecurity Framework, OWASP.

EXPERIENCE

University of Washington, Academic Technologies
Systems Consultant **Jan. 2022 – Present**

- Developed and maintained macOS and Windows disk images and application packages for rolling deployment.
- Assessed and ensured adequate security protocols were followed for over 300 machines across multiple locations.
- Monitored and responded to ongoing security risks throughout the lab.

University of Washington, Information School
Teaching Assistant INFO 310 - Information Assurance and Cybersecurity **Sep. 2023 – Mar. 2024**

- Assisting students in understanding fundamental cybersecurity concepts.
- Developing web applications for students to deploy in Docker, allowing students to apply security concepts learned in lecture in a practical and secure environment.
- Working with instructor to improve course materials, assignments, and lab exercises to enhance learning experience.
- Leading weekly labs to provide learning support by demonstrating practical cybersecurity skills and tools.

RESEARCH PROJECTS

University of Washington
Tor Research (SimulaTor) **Feb. 2023 - Present**

- Designing and conducting an experimental study to explore bandwidth inflation to alter traffic of the Tor network through malicious relays.
- Deployed 13 Raspberry Pis configured as various types of nodes to simulate a micro-Tor network.
- Developing "SimulaTor"; a framework for constructing a simulated Tor network using physical nodes to help support efforts of replicability in security research.
- Prototyping alternative bandwidth measuring solutions that are not vulnerable to bandwidth inflation attacks.

PERSONAL PROJECTS

University of Washington
Multiplayer Tic-Tac-Toe - *github.com/zkornas/TicTacToeRFC* **May 2023 - June 2023**

- Developed a multiplayer Tic-Tac-Toe game in Java, adhering to the Tic-Tac-Toe protocol RFC to enable users across diverse platforms to connect to a central server and engage in seamless, real-time gameplay.
- Designed a robust client-server architecture to manage player communication and synchronize sessions.
- Ensured sophisticated error handling and input validation mechanisms to maintain uninterrupted interactions between clients and the server.

University of Washington
Dub Dumps - *github.com/info340b-sp22/Dub-Dumps* **Apr. 2022- June 2022**

- Created a react-based website for students to easily find and rate campus bathrooms using school email authentication. Implemented sorting by proximity, accessibility, and ratings for user-friendly experience
- Utilized firebase for secure user data management and hosting.
- Developed for the full stack by constructing an intuitive U.I. as well as optimized data logic for structured queries.