HARUN OZ

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Education

Florida International University — Miami, FL
Doctor of Philosophy in Computer Engineering *GPA: 3.95* — August 2019 - July 2024

Florida International University — Miami, FL
Master of Science in Computer Science *GPA: 3.95* — August 2019 - July 2022

Antalya Bilim University — Antalya, Turkey
Bachelor of Science in Computer Engineering *GPA: 3.45* — August 2014 - June 2019

Work Experience

Keysight Technologies — Austin, Texas
Research and Development Intern — June 2022 - August 2022

- Focused on enhancing the capabilities of the Threat Simulator platform.
- Utilized Tensorflow to develop machine learning models that mapped customer event data to MITRE ATT&CK vectors.
- Documented model architecture, methodologies, and outcomes for internal and external reference.

Florida International University — Miami, FL
Graduate Research Asisstant — August 2019 - Present

- Conducted a data-driven approach to analyze the security risks and malicious effects of emerging web technologies and applications in collaboration with Google researchers.
- Identified and disclosed security vulnerabilities in open-source Node.js applications and libraries, impacting over 2 million web applications, and received 19 CVEs.
- Published academic papers in top-tier cybersecurity conferences/journals and filed 2 patents.
- Mentored 10+ undergraduate students in a mentorship program funded by Microsoft.

JSON Software — Antalya, Turkey
Part-time Software Engineer — Dec 2017 - May 2018

- Developed and maintained robust server-side components using Node.js.
- Collaborated in process planning and addressed backend-related issues.
- Reviewed and optimized implemented API endpoints, resulting in 20% increase in response times.

LUG ENERGY — Valencia, Spain
Software Engineer Intern — Jun 2017 - Aug 2017

- Developed automation scripts using Python to streamline various tasks within the WallBoxOK application, leading to increased operational efficiency and accuracy.

Selected Completed Projects

Ransomware over Browsers *C++, JavaScript, Python*
Explored a novel attack vector for ransomware over the browsers in collaboration with Google. Analyzed Chromium source code and implemented three defense strategies that operate at different levels against this threat. Presented our findings at the USENIX Security Conference and published Google Research portal.

NodeSecure *Web Application Analysis, Node.js, Python*
Developed an dynamic detection tool for Unrestricted File Upload (UFU) vulnerabilities in Node.js applications. This tool uncovered vulnerabilities in open-source Node.js applications, affecting over 2 million web applications and resulting in 19 high-severity CVEs.

Users Rating Behavior for Recommendation Systems *Machine Learning, TensorFlow, Python*
Conducted in-depth analysis of user rating patterns in recommendation systems by leveraging the MovieLens dataset and different types of collaborative filtering techniques. The insights offer pathways to optimize recommendation algorithms and increase engagement.

Awards and Achievements

Received student travel grant from ACM for attending WiSec 2022 conference. — May 2022

Received the first Author Publication Incentive Award. — October 2022

Award for being ranked second best among the fourth-year undergraduate students. — June 2019