JOHN SAMUELS

PROFILE

Understanding common vulnerabilities: Completed an undergraduate course in Information Security with the highest degree classification (1st), and achieved the highest average in the second year.

Working with programming languages: Strongly familiar with Java, Python, C, Intel X86 assembly, and Javascript. Contributed to the Python Software Foundation, Microsofts Election Guard, Scapy, and Gorgonia.

Understanding endpoint security products: Worked with endpoint and perimiter security products as a security engineer intern and currently as a full stack developer. Also have a through understanding of network security products through my undergraduate.

Writing technical reports: Completed an undergraduate thesis with a grade above 80% that explored technical topics including adversarial machine learning, binary analysis, and the ethics of cyber warfare.

Using debuggers and disassemblers: Completed an undergraduate thesis on automating malware detection and generation, and dived thoroughly into disassembling, obfuscating, and instrumenting binaries. Also participate in CTFs and hackthebox challenges focused on reversing.

CONTACT DETAILS

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AWARDS & RECOGNITION

- 2020 Completed the Advent of Cyber on TryHackMe.
- 2020 Defcon Aerospace village awarded me with free swag for being the 4th person to solve all of their challenges including ddsat1 out of hundreds of participants.
- 2018-2019 BUCS Award for highest average of the year.
- 2018-2019 Passport award for 100+ hours of extracurricular activites and community services as the Computing Society Secritary and later Vice President.

SKILLS AND ABILITIES

Programming Languages: Python, Java, C, Dart/Flutter, Javascript/JSON/Node, React, Prolog, SQL, x86 Assembly, Rust

Tools: Ida Pro, Ghidra, gdb, x32/x64dbg, Virtualbox, redare 2, gcc, valgrind, Scapy.

Spoken Languages: Spanish (Intermediate), Mandarin (Intermediate)

SECURITY EXPERIENCE

Undergraduate Researcher

RHUL Information Security Group | Summer 2019

- Accepted as part of a sponsored research team sponsored to explore defenses against Intel SGX enclave malware.
- Explored techniques and primitives a malicious enclave could use to take control of a machine, and put together PoCs.
- Designed a framework to effectively mitigate enclave malware using memory protection keys, that could be added to an existing code base.
- Successfully implemented the framework in C and successfully mitigated PoCs.

Jr. Full Stack Developer

Zealous Media | 2020 - Present

- Invited to join a startup and a team of 4 to build an advanced Squadcast competitor.
- Communicated directly with the CEO to determine software requirements and provide consulting.
- Designed and implemented several versions of the product, while learning svelte, typescript, and WebRTC on the job. Utilized my existing experience with AWS and Docker to deploy our services.
- Successfully implemented the key requirements of the product and working towards releasing a beta.

Security Engineer Intern

Zenabi Data | Sumer 2019

- Zenabi wanted to process PAN data for a rewards program, and wanted a solution that could be integrated with their existing cloud infrastructure.
- Communicated with my manager to devise a PCI DSS compliant solution to enable the storage and retrieval of PAN data with minimal changes to their cloud infrastructure.
- Implemented an open source framework called KAPPAS that can be used in conjunction with AWS cloud formation to quickly spin up new data stores.

EDUCATION

Royal Holloway University of London

Bachelor of Science, Computer Science with Information Security

- Relevant modules and average: Object
  - Oriented Programming (93%),
  - Internet Services (70%),
  - Machine Fundamentals (90%),
  - Operating Systems (88%),
  - Databases (95%),
  - Introduciton to Information Security (98%),
  - Computer and Network Security (98%),
  - Security Management (75%),
  - Cyber Security (83%),
  - Applications of Cryptography (80%),
  - Malicious Software (90%),
- Thesis titled "Machine Learning vs Machine Learning in Malware Evasion" was awarded a high first with 81%.
- Received the BUCS award in second year for highest average of the year.