Security Curriculum Developer and Instructor Internship

Location: 115 Central Island St., Daniel Island, SC
Internship Dates/Hours: Required Tuesday-Thursday (9am-4pm); Mondays and Fridays optional, but preferred

Internship Description: NodeSC, a 501(c)(3) non-profit, is seeking two College of Charleston Honors interns in the Department of Computer Science to develop a 9-lecture course on the topic of Web Vulnerabilities. The student interns will subsequently co-teach their curriculum to 4-6 Charleston-area high school computer science students at the NodeSC site located on Daniel Island, SC.

To assist in the development and presentation of the Web Vulnerabilities curriculum, interns will work under the guidance of Soteria volunteers with extensive experience as professional offensive cybersecurity operators for organizations including the NSA, CIA, and DoD.

This internship is designed to provide students the following experiences:

- In-depth understanding of and hands-on experience related to web vulnerabilities commonly exploited by hackers
- Experience in honing public-speaking and project management skills
- Extensive opportunities to network with and work alongside cyber security professionals in technical and business-related areas of the field
- Ability to outreach to the local Charleston high school students community to extend the knowledge of cyber security

Core Roles and Responsibilities:

- Develop Web Vulnerabilities curriculum in coordination with Soteria staff members
- Assemble laptops and other equipment required to teach the Web Vulnerabilities course lab components
- Teach Web Vulnerabilities curriculum to Charleston County high school students under guidance of Soteria moderator(s)

Additional Roles and Responsibilities:

- Refine existing NodeSC Linux, Windows, and Networking curriculum and convert to NodeSC brand guidelines
- Assist in Soteria asset tracking efforts
- Develop syllabi for current NodeSC courses (Linux/Windows, Networking, and Web Vulnerabilities)
- Assist in refining NodeSC's Wordpress website to ensure content is accurate and up-to-date
- Develop questionnaire for screening high school students interested in NodeSC curriculum
- Develop survey for students exiting program to track continued efforts to student security
- Develop system for screening Web Vulnerabilities course instructors

Required Qualifications:

- Must be a College of Charleston Honors student actively enrolled in a relevant major within the Department of Computer Science.
- Must be a rising Sophomore, Junior, or Senior.
- Must be available for required dates and hours.
- Must display evidence of prior formal or independent study in the field of computer science.
- Must have a general familiarity with "Lecture" topics listed in the Proposed Web Vulnerabilities Course Syllabus (see page 3) by start of internship (May 15, 2018).
- Must have strong communication and writing skills and display a comfort with public speaking/teaching.
- Must be comfortable working independently, with a team, and with a supervisor.
- Must exhibit professionalism and personal responsibility.

Compensation:

NodeSC is offering a $500 stipend for full program participation between May 15, 2018 and August 3, 2018.

Application:

All interested applicants must submit an updated resume with a cover letter for consideration into the program.

In your cover letter, please identify the following:

- Work, educational, or extra-curricular experiences related to cyber security or computer science
- Personal goals for the summer program
- Personal career aspirations
- Days and times you will be available between May 15, 2018 and August 3, 2018
- Additional internships, jobs, or other pre-scheduled commitments between May 15, 2018 and August 3, 2018

Email PDFs of your resume and cover letter to Riley Csernica at riley@nodesc.org. Selected applicants will be required to participate in an interview with NodeSC program coordinators before acceptance into the program.

Soteria, a veteran-owned security consultancy, was founded in 2014 by former hackers for the National Security Agency. The firm's mission is to provide business of all sizes access to the tailored security solutions and knowledge required to cultivate strong security policies and procedures. Soteria service offerings include incident response, security assessments/audits, penetration testing, reverse engineering, social engineering, physical security, and architecture evaluations. The firm leverages its proprietary threat intelligence, security tool development capabilities, and general security acumen to deploy scalable security solutions bridging physical and digital arenas. www.soteria.io

To give back to the local community and grow South Carolina's cybersecurity workforce, Soteria established **NodeSC,** a 501(c)(3) non-profit, to develop education and training programs focused on preparing students for careers in security. Training emphasis includes incident response, security assessments/audits, penetration testing, reverse engineering, social engineering, physical security, and architecture evaluations. NodeSC relies heavily on its volunteers comprised of former NSA, CIA, D.o.D, and commercial sector security professionals to constantly expand and evolve its offerings. www.nodesc.org

Proposed Web Vulnerabilities Course Syllabus

Session Title	Lecture/ Lab	Date	Time
Onboarding	Lecture	Tuesday, July 10, 2018	1:00p-2:30p
HTTP Protocol	Lecture	Wednesday, July 11, 2018	10:00a-11:30a
Interpreting HTTP Headers	Lab	Wednesday, July 11, 2018	1:00p-2:30p
Client Side Languages	Lecture	Thursday, July 12, 2018	10:00a-11:30a
JavaScript Lab	Lab	Thursday, July 12, 2018	1:00p-2:30p
Server Side Languages	Lecture	Tuesday, July 17, 2018	10:00a-11:30a
PHP (or other language) Lab	Lab	Tuesday, July 17, 2018	1:00p-2:30p
Directory Traversal Vulnerabilities	Lecture	Wednesday, July 18, 2018	10:00a-11:30a
DT Lab	Lab	Wednesday, July 18, 2018	1:00p-2:30p
Cross-Site Scripting	Lecture	Thursday, July 19, 2018	10:00a-11:30a
Cross-Site Script Lab	Lab	Thursday, July 19, 2018	1:00p-2:30p
SQL Injection	Lecture	Tuesday, July 24, 2018	10:00a-11:30a
SQL Injection Lab	Lab	Tuesday, July 24, 2018	1:00p-2:30p
SQL Injection 2	Lecture	Wednesday, July 25, 2018	10:00a-11:30a
SQL Injection Lab 2	Lab	Wednesday, July 25, 2018	1:00p-2:30p
Authentication and Authorization	Lecture	Thursday, July 26, 2018	10:00a-11:30a
A&A Lab	Lab	Thursday, July 26, 2018	1:00p-2:30p
Capstone	Lecture	Tuesday, July 31, 2018	10:00a-11:30a
Final Lab	Lab	Tuesday, July 31, 2018	1:00p-2:30p
Student Wrap-Up Presentation Prep	Lab	Wednesday, August 1, 2018	10:00a-2:30p
Student Wrap-Up Presentation/ NodeSC Open House	Lecture	Thursday, August 2, 2018	1:00p-2:30p