Shrikar Vasisht

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EDUCATION

University of Maryland, *College Park* — Expected Graduation - May 2024
B.S. in Computer Science and Applied Mathematics, Advanced Cybersecurity Experience for Students (ACES) Minor
Relevant Coursework: Computer Security, Data Structures, Organizations of Programming Languages, Algorithms, Python Web Development, Linear Algebra, Multivariable Calculus, Number Theory

EXPERIENCE

Cyber Security Analyst Intern, *Leidos* — June 2022 - August 2022
- TBA

Research Intern, *University of Maryland Breakerspace Lab* — June 2021 - Present
- Working under Dr. Dave Levin on vPing, a system to gather data about VPNs and their users by using network protocols to identify and geolocate the clients. (February 2022 - Present)
- Worked on Bento, a modified version of Tor that allows for middleboxes to run different functions
- Developed an implementation of the MQTT network protocol using the Python Sockets library to run on Bento; Used the previously written Bento API to modify the broker to work with multiple senders and receivers. (June - September 2021)

Research Intern, *UMD CS Department* — Summer 2019 and Fall 2020
- Implemented a machine learning algorithm in Python for the game Nim With Cash using reinforcement learning techniques under Dr. Bill Gasarch.
- Identified parameters that lead the ML engine to perform better against a strategy game like 'NIM with cash'. (May - August 2019)
- Implemented the Linear Congruential Generator random number generation algorithm in Python and cracked it based on encrypted text. (Sept 2020 - Jan 2021)

Teaching Assistant, *UMD Smith School of Business* — September 2021 - December 2021
- TAing for a web application development class for business and information systems students
- Helping students with coding projects using HTML, CSS, Javascript, and SQL

Club Secretary, *UMD Cybersecurity Club* — May 2021 - Present
- Designing graphics and sending emails and announcements for weekly club meetings and other events
- Communicating with companies for sponsorship of the club
- Created an Instagram page for the club to advertise meetings and events

Puzzle Writer, *inteGIRLS Puzzle Hunt* — March 2020 - Present
- Writing a variety of math and logic puzzles for middle and high school girls
- Helped organize puzzle and competitor data using database management systems including Google Sheets
- Using the p5 Javascript library to design interactive puzzles

PERSONAL PROJECTS (GITHUB.COM/SHRICUBED)

Hebi, *Python* — Spring 2021 - Present
- Python tool to easily access and manipulate data about anime series and films from an already existing database
- Uses JSON manipulation libraries to extract different data points based on user requests

Nutrimatic.org Discord Bot, *Python* — January 2021
- Discord bot for querying nutrimatic.org, which is a site used for solving word puzzles
- Uses the BeautifulSoup web scraping library to return output of different regular expression queries
- Used Heroku to host the bot for our team during online puzzle hunts

COMPUTER AND PROGRAMMING SKILLS

Programming: Java Object Oriented Programming, Python, C, OCaml, Ruby, Rust, HTML/CSS, SQL/Database Management
Concepts: Cryptography, Cyber Forensics, Data Structures (Trees, Lists, Maps, Stack/Queue), Multithreading, Software/Web Security
Software: GDB, Git, MATLAB, Microsoft Office, Google Docs/Slides/Sheets, Vim, LaTeX
Tools/APIs: Flask, Jinja2, Python Cybersecurity Libraries, Numpy, Linux/Unix, Wireshark, Steganographic Tools

EXTRACURRICULAR ACTIVITIES

CTFs and Programming Competitions,
- 8th Place Nationally in Cisco CyberPatriot
- 2nd Place in Lockheed Martin CodeQuest and CyberQuest
- 4th Place in UMD Programming Competition 2019
- Wrote challenges for UMDCTF in a variety of cybersecurity and computer science subdomains.