HAMZA SHAIKH
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EDUCATION

Purdue University – West Lafayette - Bachelor of Science in Computer Science - 2023 - GPA: 3.58 (CS) 3.66 (Overall)
Concentrations: Machine Intelligence, Security

PROGRAMMING LANGUAGES / KNOWN PLATFORMS:

Java, Python, C, JavaScript, Typescript, MongoDB, NodeJS, React, Deno, Docker, Google Firebase Auth & Storage, Splunk, GCP VMs, NGINX, AWS DynamoDB, AWS Amplify, PyTorch

EXPERIENCE

Cisco - RTP, NC

Software Engineering Intern - Vulnerability Management **May - August 2022**

- Developed a time-efficient, memory optimized python code that synchronized ratings for millions of vulnerabilities between Cisco and Kenna, an acquired company whose engineering team I had weekly meetings with, then deployed said code as a cronjob on a production server.
- Developed and deployed a feature allowing security analysts to fetch information about specified threat groups or vulnerabilities. The feature called APIs from Recorded Future about the query and manipulated the resulting data to compile a pandas dataframe with recorded instances and documents referencing relevant threat actors in cyberspace, pushing the resulting dataframe to splunk for further digestion.

Software Engineering Intern - Threat Intelligence **May - July 2021**

- Used python libraries to parse through threat intelligence and analysis cases for indicators of concern and created a workflow tool to allow such indicators to be shared with a malware information-sharing community.
- Conducted technical analysis of cases for machines requesting blocked domains, analyzing such traffic using splunk queries, looking through logs, and found context surrounding such cases to determine if machines were infected or edited with malicious software or not.
- Analyzed the process of such technical analysis steps and proposed a redesign/restructure of relevant proprietary tools to make analysis more efficient, using automation to reduce redundant tasks with precompiled information.

WootCloud Cybersecurity - San Jose, CA **June 2020 - March 2021**

Data Science Intern

- Developed tools automating the collection and identification of wireless devices made by different manufacturers registered in the FCC. Stored such data in MongoDB servers for future cross-reference searches and classification.
- Created data sets for the training of Machine Learning models to classify devices into different categories of electronic devices using metadata and photo identification and retrained ML models with Tensorflow using such data sets.

Stanford University - Palo Alto, CA **June - Oct. 2018**

Volunteer Instructor Assistant

- Assisted Biomedical Engineering Instructor in designing a project where undergraduate students make a fermenter with microcontrollers to sync data to cloud storage.
- Collected data for a fermenter and integrated real-time visualization through ThingSpeak API.

PERSONAL PROJECTS

LogicNerve **2021 - Present**

- Leading a team of multiple students in designing and producing a HIPAA-compliant online medical IoT platform in which medical professionals can interact with patients asynchronously using modules.
- Utilizing Docker containerization, microservice architecture, NGINX reverse proxy, and memory optimized MongoDB storage principles with focus on time efficiency and scalability.
- Constructed multiple NodeJS microservice backends with REST APIs utilized by a React frontend.
- Using Firebase, Google Cloud products, and serverless functions to store data and handle account authentication.

Meme Hotline **Nov. 2019**

- Collaborated with a team to use the Twilio and Giphy APIs so that users could send texts and receive a meme of the same subject.
- Created the capability to send a picture and use OpenCV to identify eye location, edit the image to “deep-fry” it, and return it. Used remote ssh access to host the picture on a third-party server.

OTHER EXTRACURRICULARS / POSITIONS

Hello World 2019 Purdue Hackathon “Most Innovative” for *“VR Classroom”* project*,* Award for best use of Giphy API in Vandyhacks 2019 Hackathon for *“Meme Hotline”,* Purdue Hackers Club, SIG-AI, ACM, Cerias