

Sebastian George Grammas

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Computer Science student at Rensselaer Polytechnic Institute (RPI) seeking an internship opportunity to apply my experience and passion for computer science.

Relevant Experience

Interned at ALQIMI Technology Solutions in Rockville, Maryland from May-August, 2024

- o Designed and implemented web scraping solutions to extract PDFs and critical information, integrating data with Elasticsearch for optimized search functionality.
- o Developed and deployed NiFi pipelines to automate code uploads to server environments.
- o Researched and implemented methods to extract data from image-based PDFs without local file storage, ensuring compliance with server restrictions and creating a scalable solution for future use by the company.
- o Enhanced and optimized Vega-based dashboards, refining query logic for improved visualization, performance, and anomaly detection accuracy.
- o Developed a formula to prioritize anomalies by relevance and frequency, conducting experiments on bucket lengths and historical comparisons to refine scoring models.
- o Built and tested anomaly detectors for the Summer Olympics, while researching proximity search techniques for advanced querying in Vega code.
- o Engaged in an open-source software development project at RPI called Easy Artistry based on existing open-source resources. Easy Artistry is a tool intended to aid small artists and indie studios in developing larger projects using AI image generation.
- o Completed Modern Binary Exploitation course at RPI utilizing the RET2 WarGames software
- o Compete in NCL competitions every semester
- o Member of ISC2, Certified in Cybersecurity (CC)

Relevant Skills

- o **Binary Exploitation:** Utilizing the RET2 WarGames software, gaining hands-on experience in advanced binary exploitation techniques, including stack-based buffer overflows, return-oriented programming (ROP), bypassing ASLR and NX protections, reverse engineering, and analyzing vulnerabilities in real-world binaries
- o **Web Scraping:** Experienced in writing custom scripts to extract and process data from websites, ensuring efficient and accurate data collection for analysis.
- o **Data Engineering:** Proficient in designing and deploying NiFi pipelines, automating data workflows, and integrating data with Elasticsearch for scalable search solutions.
- o **Data Science & Visualization:** Skilled in optimizing Vega-based dashboards, enhancing anomaly detection models, and developing algorithms for anomaly scoring and trend identification.
- o **Developed expertise in network security and defense mechanisms**, including packet sniffing and spoofing, TCP/IP vulnerabilities, ARP and ICMP attacks, DNS security (local and remote DNS attacks), firewall configuration and bypassing, VPN implementation, PKI and TLS protocols, and CDN security strategies.
- o Problem Solving and Critical Thinking
- o Strong Mathematical Foundation
- o Programming Languages: Java, Vega, Python, C++, C, JavaScript, Matlab, Assembly, Dafny, and R-Studio.
- o Demonstrated problem-solving skills through algorithm development .

Education

Rensselaer Polytechnic Institute, Troy, NY. Expected graduation: May 2026. GPA 3.10

- o Major: BS Computer Science with a concentration in Systems and Software; Minor: Economics
- o Scholarships: Rensselaer Recognition Scholarship and Rensselaer Leadership Scholarship
- o Activities: NCAA Soccer; Pi Kappa Alpha Fraternity Recruitment Officer