SEDAT ALTUN

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Cybersecurity & AI-Driven Software Programming Intern

Space Force Officer Select | 2+ years in cybersecurity, AI integration, and secure software development. Experienced in blending machine learning, prompt engineering, and DevSecOps practices to detect threats, enhance automation, and streamline secure code delivery

Experience

Air Force Institute of Technology (ICE Program) — Cybersecurity Intern

July 2024 – August 2024

- Conducted digital forensics, network defense, cryptography, and reverse engineering exercises using tools such as **BinaryNinja**, **Ghidra**, and **Metasploit**.
- Leveraged **AI-assisted** analysis for malware pattern recognition and anomaly detection, refining prompts to extract actionable intelligence from large technical datasets.
- Developed automated workflows combining **AI** output with manual inspection to increase investigative speed and accuracy in simulated **ICS** network environments.
- Collaborated in competitive **Hackfest** challenges, applying **AI** tools for rapid reconnaissance, vulnerability analysis, and threat emulation in different OS environments.

IT Society (DevSecOps Intern)

February 2025 – May 2025

- Integrated **Semgrep** into **CI/CD** pipelines for automated secure code enforcement, implementing **GitHub Actions** to block insecure pushes and create actionable security issues.
- Employed **AI-assisted** code review tools, using prompt engineering to fine-tune vulnerability explanations and remediation suggestions for integration into developer documentation.
- Built and deployed a **Python**-based **Discord webhook** for real-time security alerts, combining AI-powered summaries with direct scan results to improve team awareness.
- Authored a technical blog post showcasing the AI-DevSecOps workflow and lessons learned.

Education

- 2023- **Bachelors of Science**, Computer Science, Double Minor in IT Management and Data Science, California State University, East Bay (Expected Graduation: May 2026).
 - Relevant Courses: Analysis of Algorithms, Security and Info Assurance, Data Structures and Algorithm(C++), Programming Language Concepts.
- 2022-22 Bachelor of Science Credits, Computer Science, De Anza College.
 - Relevant Courses: **Data Structures(Python)**, **Java Programming**.

Projects & Challenges

TRON AI Assistant Project

April 2024 – Present

- Designed and iterated on **Rasa** NLU pipelines to improve multi-intent recognition and context-aware conversations using Python and integrated APIs (**OpenWeather**, location services).
- Applied **prompt engineering** principles to improve clarity, accuracy, and adaptability in **AI-driven** responses.
- Experimented with **LLM-based** backends to enhance TRON's ability to handle complex, multi-turn queries and retrieve precise, context-relevant data
- Implemented automated test scripts for dialogue flows, improving stability and reducing response errors.

Cyber Sentinel CTF – Department of Defense

June 2025

- Solved challenges in web exploitation, traffic analysis, Tor hidden services, and steganography using Wireshark, Burp Suite, and Nmap.
- Used **AI-assisted** reconnaissance and steganographic decoding, crafting targeted prompts to accelerate pattern detection and flag recovery.
- Ranked **492 out of 2,154** participants in a national-scale competition.