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CYSE368

Reflection #2

Second 50 Hours Cybersecurity Internship Reflection

During the second 50 hours of my internship with CAE in Cybersecurity Community, contracting with Augusta University, our team made significant progress in understanding and modifying the codebase left by the previous cohort (Cohort 5). While the initial stages were challenging due to the complexity of the existing project, we took the initiative to schedule a meeting with one of the former interns who helped develop it. That conversation gave us valuable insights into the structure and functionality of the code, helping us clearly distinguish between the frontend and backend components.

With that understanding, we began focusing on the backend code to replace Google Gemini with Ollama, allowing the parsing of PDF-based questions to be handled locally. This was a key step in improving data privacy and minimizing reliance on cloud-based AI services. A good portion of our time was spent not only editing the backend logic but also testing different Ollama models to determine which performed best in terms of speed, processing capabilities, and token handling.

One of my personal milestones during this phase was figuring out how to self-host Ollama locally using Docker. From there, I was able to integrate it with OpenAI's API framework, effectively giving the system a ChatGPT-style user interface while keeping the model completely local. This solution helps bridge usability and security which are two key pillars in modern cybersecurity systems.

This experience continues to push me out of my comfort zone and expand my skills in backend development, containerization, and AI integration. I've gained a much deeper appreciation for how AI and cybersecurity intersect, and I'm excited to continue building on this momentum.