

Capstone Project Team P1-07

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Project title: Incremental Security Enforcement for Cyber-Physical Systems

Abstract:

This capstone project will focus on developing an incremental security enforcement framework for Cyber-Physical Systems (CPS). CPS, which combine computational elements with physical processes, are increasingly vital in modern technology. However, their complexity makes them vulnerable to cyber-physical attacks (CP-attacks). Unlike traditional cyber-attacks, these attacks cannot be mitigated by simple software patches, necessitating a more robust, adaptable security mechanism. The project's goal is to create a framework that can incrementally add new security policies to CPS as new threats are identified. This will involve implementing runtime enforcement (RE) techniques that allow the system to integrate additional security measures without compromising the performance or integrity of existing ones. The project will showcase how such a framework can be designed, implemented, and tested in a controlled environment.

Project Guide: Dr Sudeep K.S