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Research Paper Topic

My research will be focusing on how software developers can use machine learning modules in their code to detect erroneous input that may or not indicate an actor trying to alter the environment or spoof/fuzz false data. The article we read on placing software security flaws in a taxonomy placed input verification as one of the most important phyla. We should care because the Air Force uses numerous cyber physical systems that depend on accurate sensor inputs to function properly. If we train these systems on data typical of the actions they perform, they will be able to signal to the operator that they are reading inputs that may be tampered with or indicate that a sensor require maintenance. This also prevents many human errors associated with creating an exhaustive error checking routine. My end goal for this research paper would be to provide direction that we could provide programs in how to apply these machine learning capabilities to the information assurance pertinent to their operations.