Researchers at the University of South Florida have developed a model that checks the vulnerability of the software based on a timely nonlinear differential equation model during the entire life cycle.

Software flaws are discovered throughout the entire life cycle of the software. A loophole allows an attacker to compromise the system with respect to its integrity and confidentiality. Additionally, there is no software or Operating System (OS) without flaws and this scenario is most likely to continue in the foreseeable future. Thus, there is a need to overcome flaws in these software's by identifying loopholes throughout its life.

Researchers at USF have created a novel technology that efficiently helps developers of the OS examine the software readiness by predicting its future vulnerability trend. The analytical model strongly captures the complicated linear and nonlinear behavior of the historically available data points and predicts the future vulnerabilities. Each version of the software is considered individually to tackle all the loopholes and make it more secure.

ADVANTAGES:
- Future vulnerabilities can be anticipated easily
- Improved software security
- Helps developers allocate resources efficiently and implement counter measures

Vulnerability Prediction Algorithm

Number of Vulnerabilities Versus Time on Monthly Basis