# Vulnerability discovery modeling

## Summary

In this class exercise, we will introduce you to vulnerability discovery modeling.

## Prerequisites

* None

## Details

* You are responsible for the vulnerability incident handling at ACME Corporation. Next month, the first product release goes live and you have been asked to request how many personnel are needed to support security incidents. In a few sentences, what would influence your answer?
* Go to the NVD website, here: <https://nvd.nist.gov/vuln/search>
  + Enter Firefox as the keyword and click search
  + Go to one of the entries and explore the information provided
* You have historical data on vulnerabilities discovered after a public release (e.g., NVD). The data consists of the times after release that each of the individual vulnerabilities were discovered. How could you use this data to influence your previous decision?
* What variables do you think influences discovery of vulnerabilities?
* What are some problems with the available data in public repositories such as NVD?
* Instructor will go over data analysis
* Instructor will go over stochastic modeling
* Instructor will go over stochastic modeling validation
* Instructor will go over stochastic modeling uses for this application

### Definitions

* Vulnerability discovery modeling - Forecasts security fault discovery events over time and relies on patterns in historical discoveries over time (Alhazmi and Malaiya 2008, 14-22)