

PROBLEM TITLE

Real-time Predictive Analysis Engine

CHALLENGE

NORAD and USNORTHCOM analysts need an automated way to determine the anticipated target, path to the target, and optimal interruption location for cruise missile threats in order to provide leadership with the most effective deter, deny and defeat options.

BACKGROUND

The North American Aerospace Defense Command (NORAD) and The United States Northern Command (USNORTHCOM) are responsible for the Aerospace Defense of North America and overall Homeland Defense missions. As adversary threats, such as cruise missiles, become faster, deadlier, and more numerous, defending them has become increasingly difficult. Regardless of the type of threat, improving the efficiency and timeliness of defense responses contributes not only to the efficacy of the defense, but to managing the collateral cost of the response.

In the current process, when an incoming cruise missile is identified, NORAD and USNORTHCOM must manually determine the target of the missile, its speed, and the best way to eliminate the threat posed by the missile. This information must be determined as quickly and accurately as possible in order to decrease the rate of collateral damage. In order to respond to a cruise missile threat as quickly and efficiently as possible, NORAD and USNORTHCOM need an automated way to determine the anticipated target, path to the target, and the optimal interruption location. This would provide decision-makers with options to reallocate resources and even take proactive measures to deter – deny – defeat these threats.

OPERATIONAL CONSTRAINTS

- Students will be given access to analogous unclassified data in order to work on a solution

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