Special Nuclear Materials Detection

If you work with special nuclear material (SNM), you know that good radiation detection is a necessity for both safety and functionality. Clostra's SNM technology is at the forefront of accurate, long-range SNM detection today. As verified by Johns Hopkins Applied Physics Lab, Clostra's algorithm increases the detection range of nuclear materials 25-50% while reducing false alarm rates.

Clostra's SNM detector is a deep learning AI solution. During neural network training, signal processing algorithms ingest huge quantities of data and learn to separate SNM emissions from the background with an unparalleled level of precision - in spite of increased detection ranges and heavy environmental noise. For a field in which tiny mistakes can be deadly, the accuracy that comes hand-in-hand with our deep learning strategy is the perfect solution.

How does it work?

Clostra's algorithm consists of a suite of neural networks, each tuned to respond to a specific part of the emission spectrum. Each network is carefully configured and trained using large quantities of bare and shielded spectral data. Over hundreds of thousands of training sessions, our deep learning neural networks learn to recognize various source emission characteristics. Our algorithm can be implemented as an upgrade for deployed detector and processor systems using current hardware/detectors, enabling a smooth and safe transition to upgraded SNM detection.

Who is it designed for?

Hospitals, biology laboratories, and industrial manufacturers that either use or detect nuclear material will benefit from Clostra's SNM detection algorithm. Our solution has been trained and tested against a multitude of common medical sources in a variety of shielding configurations and environments, as well as nuclear materials commonly used in industrial devices such as irradiators, gauging devices, well-logging devices, and industrial radiography systems. As a speedy, accurate, and safe SNM detection system, Clostra's algorithm is the best solution out there.

Security

When it comes to nuclear detection, there are no shortcuts. Clostra's deep learning solution ensures measurably faster detection, lower false alarm rates, and higher levels of accuracy than any other SNM technology to date. Our algorithm can scan key transportation locales such as airports, seaports, and truck stops for unusual levels of radiation, preventing attacks or accidents before they happen. If an emergency does occur, our technology can trace a leak by scanning for depleted uranium levels in storage facilities.

Public Partners

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