

U.S. ARMY LOWER ECHELON ANALYTIC PLATFORM (LEAP)

MISSION

SOLUTION



The Challenge

U. S. Army desired a Lower Echelon Analytic Platform for incorporation into their Big Data Platform (BDP) for processing large raw data sets on limited compute & storage platforms.



The Response

Through an OTA, Technica prototyped and integrated into the Army's BDP two separate data analytic capabilities to solution data processing on limited platforms – Anomaly Detection and Time Series. Additionally, Technica integrated Federated Learning into the anomaly detection service. The Anomaly Detection prototype used an auto-encoder neural network to detect anomalies. The Time Series prototype uses a long-short term memory (LSTM) neural network for time series prediction. Both analytics used Keras API for building neural networks, incorporated TensorFlow for machine and deep learning capabilities, and used PyInstaller to package the analytics. A front-end UI monitors and displays the results of both prototypes.

BENEFITS TO U.S. ARMY

The incorporation of Technica's machine learning prototype capabilities into the Army's BDP allows for enhanced capabilities such as unsupervised learning opposed to signature-based network monitoring in detecting anomalies and defending against zero-day attacks.

Contact Us, We can Help.

Call: 703-662-2000

Email: Contact-Us@technicacorp.com