

# Detego

Intelligent Solutions Uncovered

## Introducing Detego

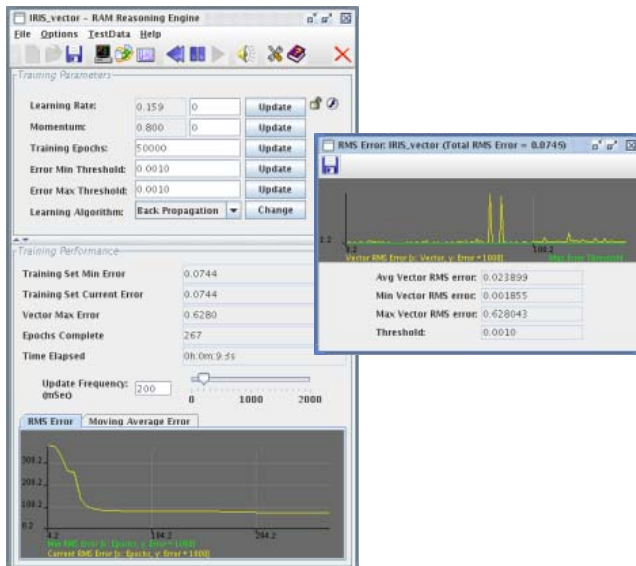
Detego was developed out of a need from NORAD USSPACECOM to rapidly implement reconfigurable sensor anomaly detectors that could train on extensive historical data sets and monitor multiple real-time live data feeds. The result is an easy to use neural network tool that operates in three modes: initialization, training, and testing.

The *Initialization Mode* allows the user to configure neural networks using any number of inputs and output nodes, along with zero to two hidden layers.



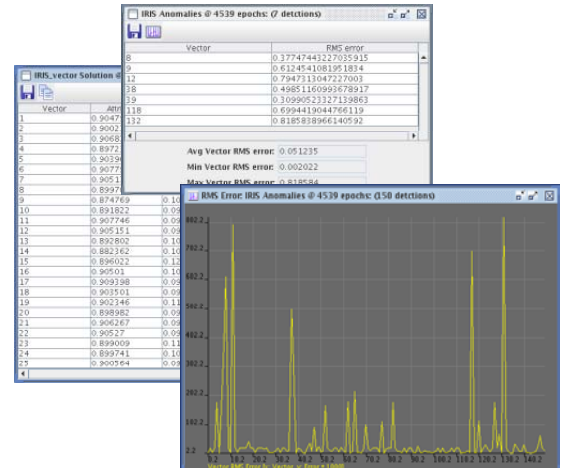
Creating a new project during initialization

The *Training Mode* allows the neural network to learn the relationships specified in the training data file, and is optimized via data encoding schemes and learning optimizations. The GUI provides real-time training performance updates and is highly interactive.



Training the Neural Network

The *Testing Mode* allows the user to evaluate new data and perform statistical analysis on the solution.



Analyzing the Neural Network solution during Test

## Features at a Glance

- GUI driven engine allows users to effortlessly create, train, and utilize neural networks for classification and prediction
- Monitors training performance in real-time via graphs that display the RMS error of the entire training set and each training vector
- Real-time interaction allows users to modify training parameters while the neural network is training
- Statistical library analyzes the neural network solution
- Supports the use of neural network architectures with zero to two hidden layers
- Provides data encoding schemes and learning optimizations that significantly reduce training time

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