

BACKGROUND

As part of training programs that Lockheed offers to companies including the Royal Canadian Navy, technical trainers must assess the training needs of the client. The current process occurs over several stages.

First, the client receives a new piece of equipment for which training is not in place. Second, the technical and operator manuals for this equipment are analyzed and broken into unique KSA¹ statements. For example: "Repair the radar"

This list is then scored in three categories to create a DIF² score. Each of the three categories in a DIF score are given a number value of 1, 2, or 3. Our example "Repair the Radar" could receive a score of 3,3,1 indicating that it is very difficult, very important, but doesn't happen often.

These DIF scores are then used to make decisions about the emphasis placed on these statements when developing training required for the new equipment.

¹KSA: Knowledge, Skills, Abilities

²DIF: Difficulty, Importance, Frequency

THE PROBLEM

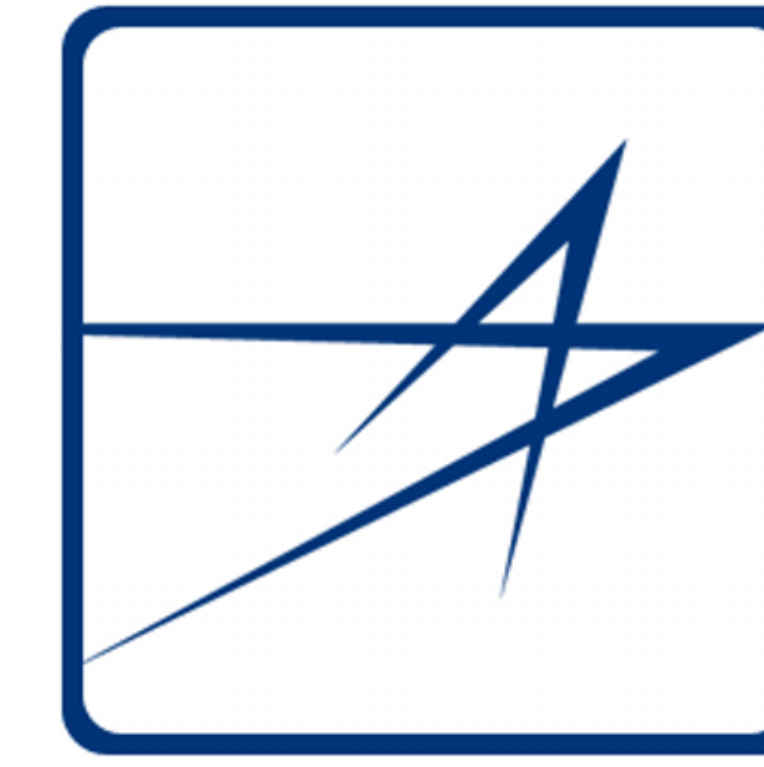
- Subject matter expert resourcing
- Inconsistent scores (biases)
- Time consuming



MILTON

Gabriel Burchat & Yang Lu

IN PARTNERSHIP WITH
LOCKHEED MARTIN



THE SOLUTION

MILTON: Machine Intelligence
Learning Training Outcomes Node

TWO-STAGE OPERATION

Stage 1: Using MILTON

The user can first enter KSA statements into the User Interface and hit the "calculate" button. The KSA gets sent to MILTON and he returns it with a DIF score which is viewed as a pop-up on the user interface screen. The trainer then has the option to accept, reject, or alter the score. This process can then repeat for how ever many KSA statements the trainer needs.

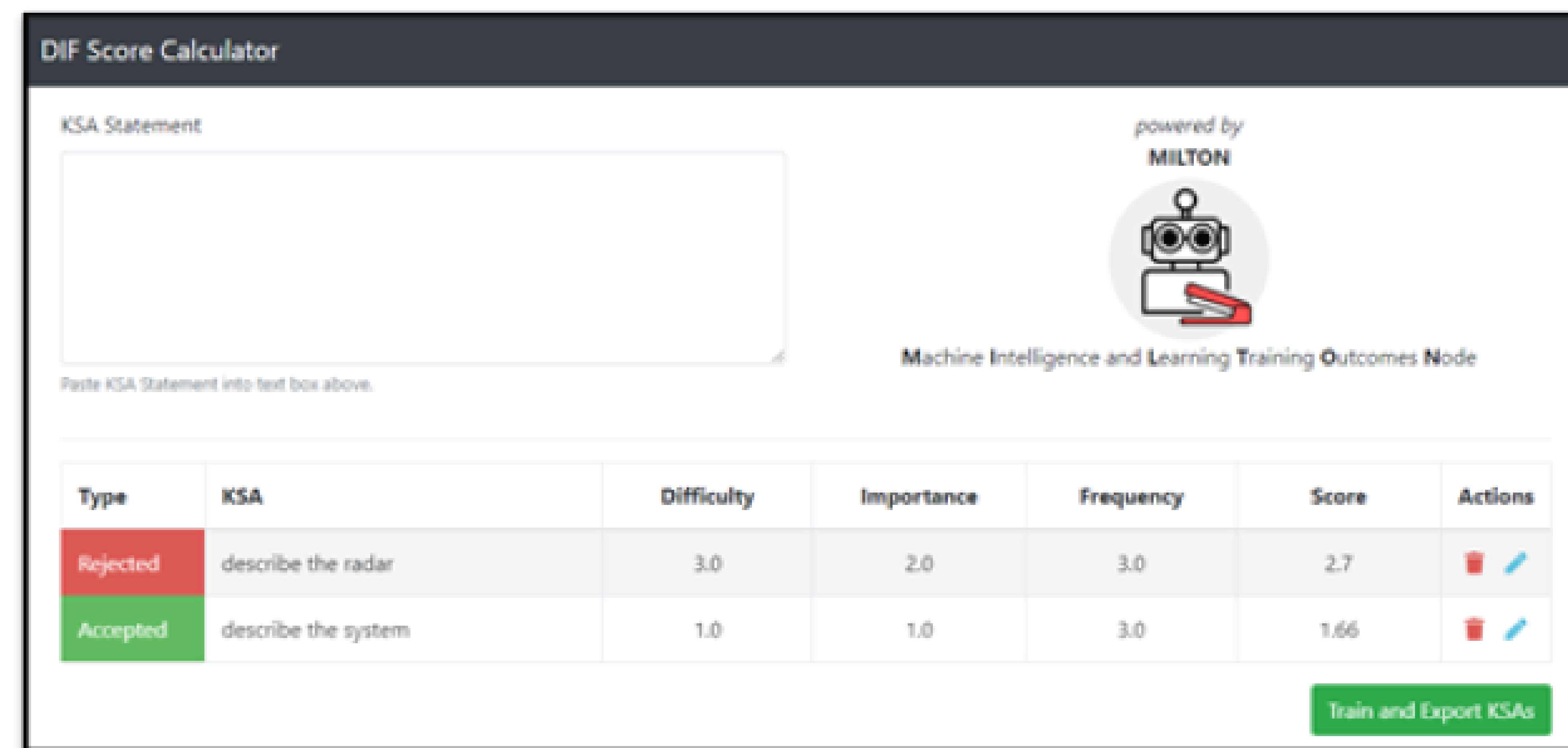
Stage 2: Updating MILTON

Once the trainer is finished with a batch of scored KSA statements, the "export" button is pushed. This sends all the KSA statements with their corresponding accepted DIF scores back to MILTON so that he can update his prediction model.

FUTURE WORK

- Scoring KSA statements based on applicable roles
- Enable KSA batch scoring
- Saving KSA statements for future analysis
- Mining KSA statements from documents

USER INTERFACE



SYSTEM ARCHITECTURE

