AI to Capture Structured Data from Technical Manifest Documents

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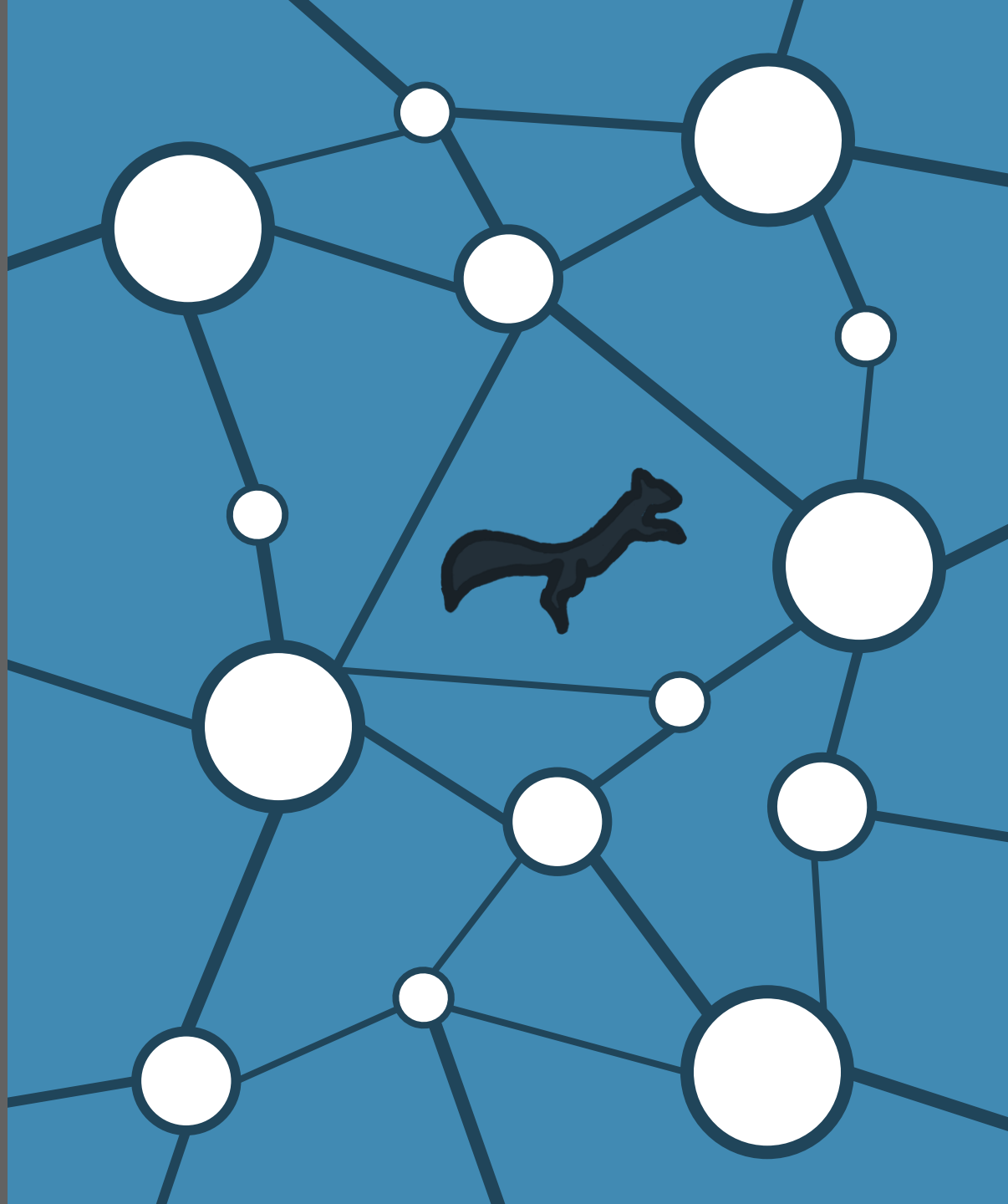


Bottom Line Up Front (BLUF)

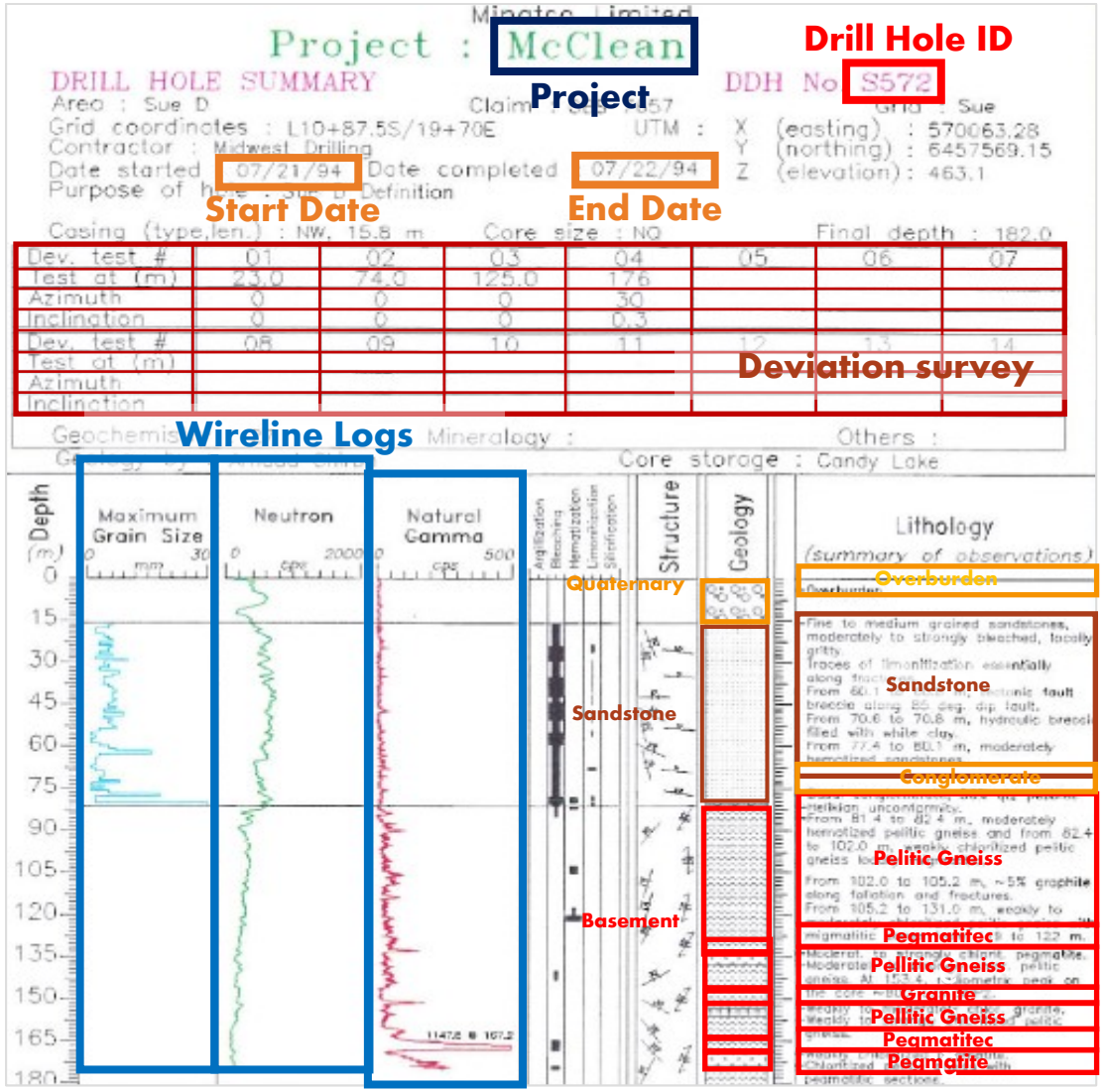
- Space
  - **Intelligent Document Processing (IDP) for Manifest Analysis**
- Problem
  - **Quickly extracting useful information from cargo manifest documents**
- Solution
  - **AgileDD: a commercial human-in-the-loop AI platform that captures technical data from heterogeneous documents to automatically populate databases and automate workflows**
- Results
  - **>12X speed up in decision making from unstructured documents**
- TRL
  - **TRL 9: Used commercially in energy and mining industry**

Human-in-the-loop data capture

AgileDD

- Document Classification
- Page Classification
- Paragraph detection and classification
- Semantic Sentence Identification
- Table segmentation and classification
- Visual Object Detection
- Textual Information Extraction

Deployable on-premise or on cloud.
Currently deployed in production for mining and energy customers. AgileDD be trained with CUI, proprietary or public domain documents depending on deployment type.



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Human-in-the-loop data capture

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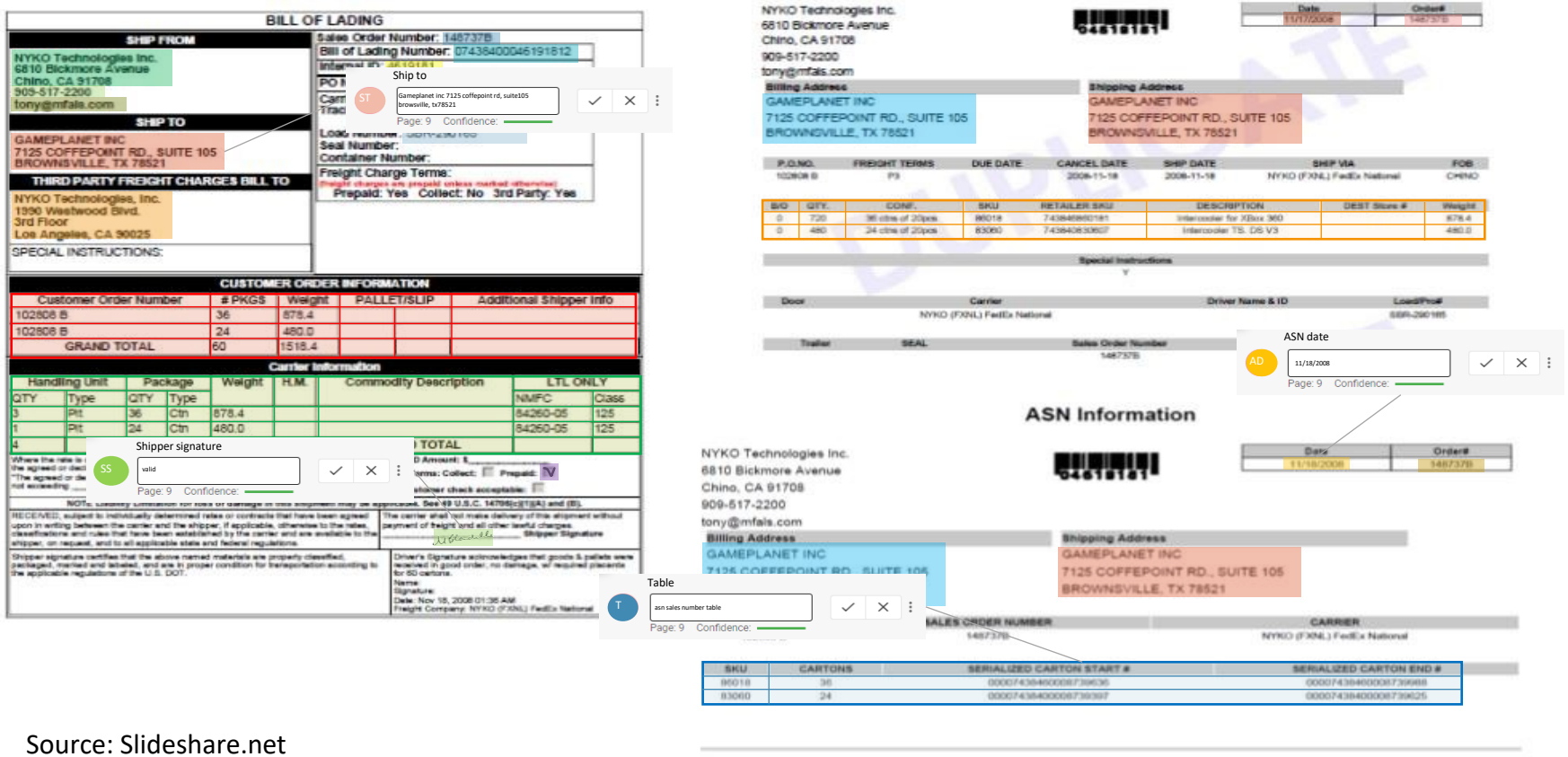
Data Capture from Manifest Documents

Document Category
Form 2134 – Shipping Manifest

L. Shipping Manifest

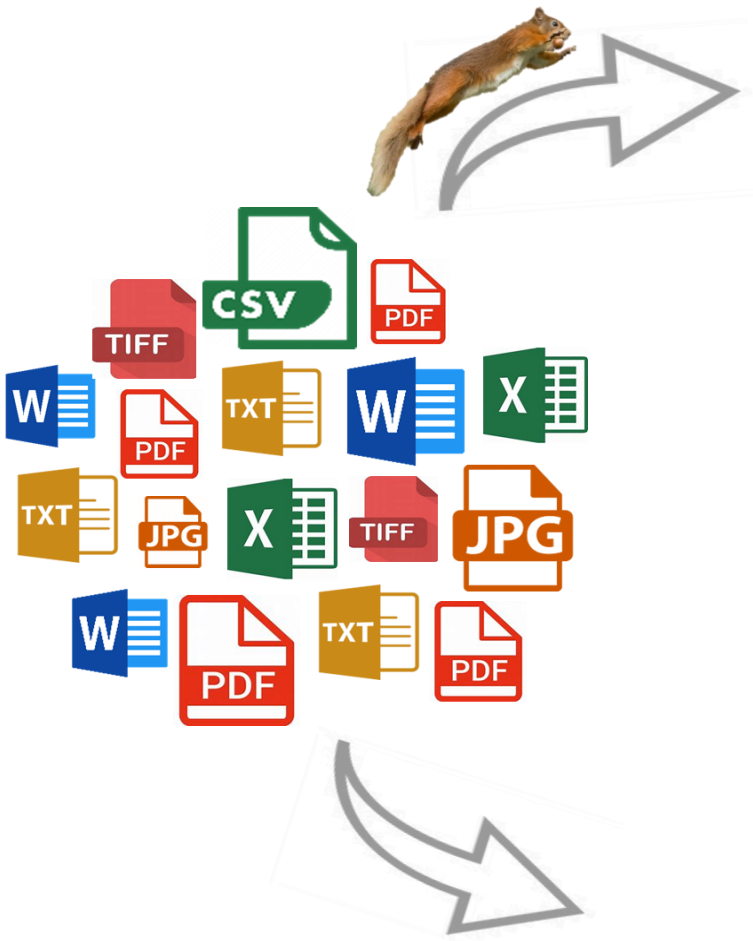


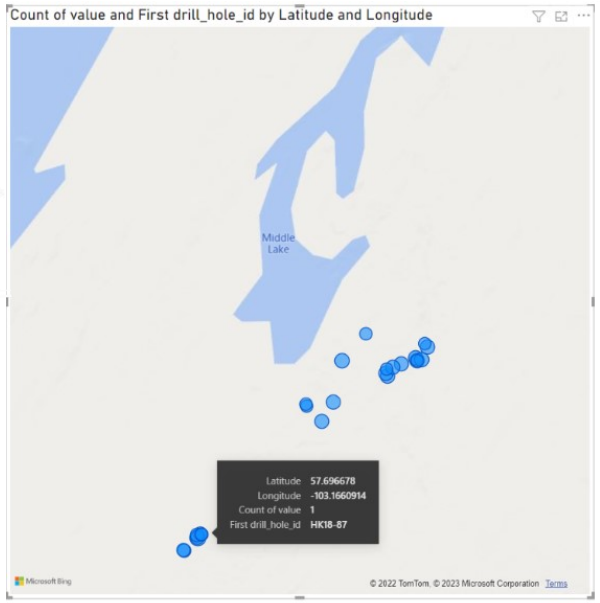
Source: Slideshare.net

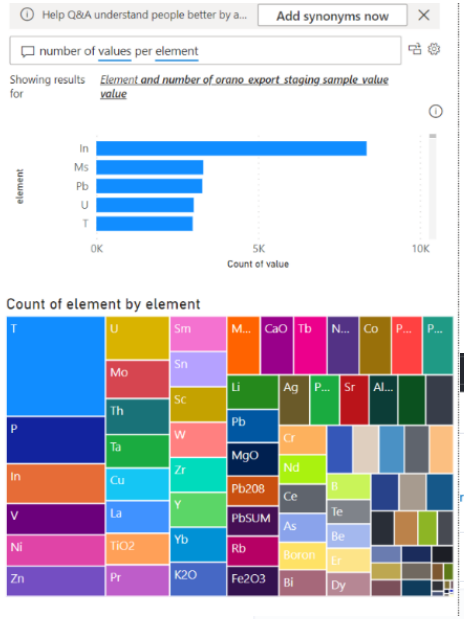
Motivational Fulfillment & Logistics Services

From Documents to Better Decisions

AgileDD

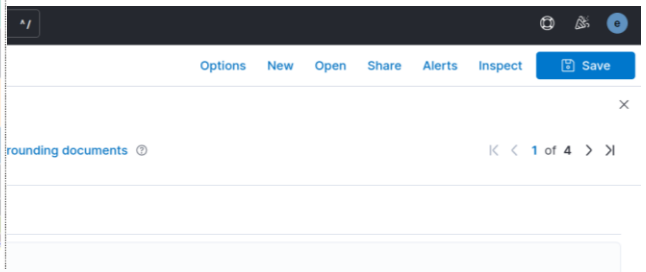


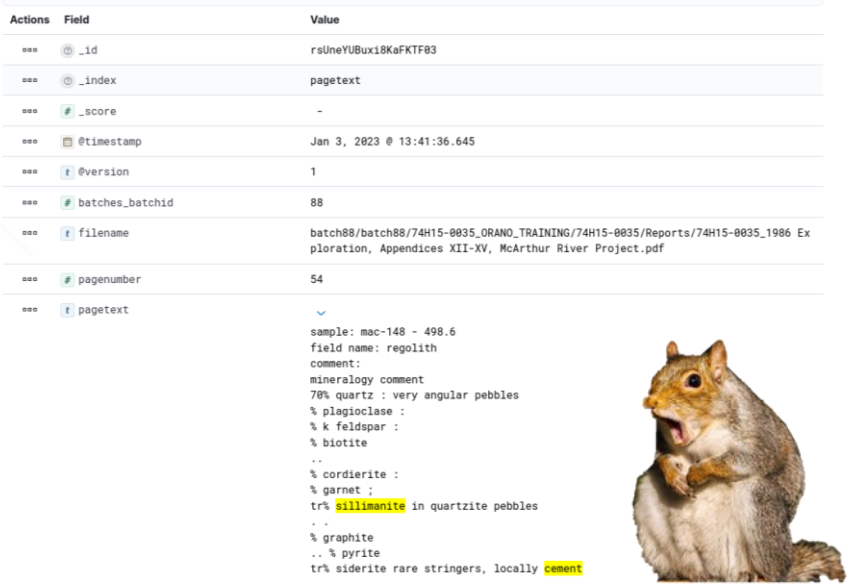




Dashboard

Search and Chat





Corporate DBs

Benefits to CBP

Efficiency

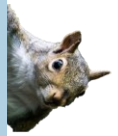
More quickly extract useful information from manifests and other documentation

Faster decisions

Focus on problem areas & inconsistencies

Lower Risk

Aggregate structured information together from multiple and hierarchical documents for analytics and "full picture"



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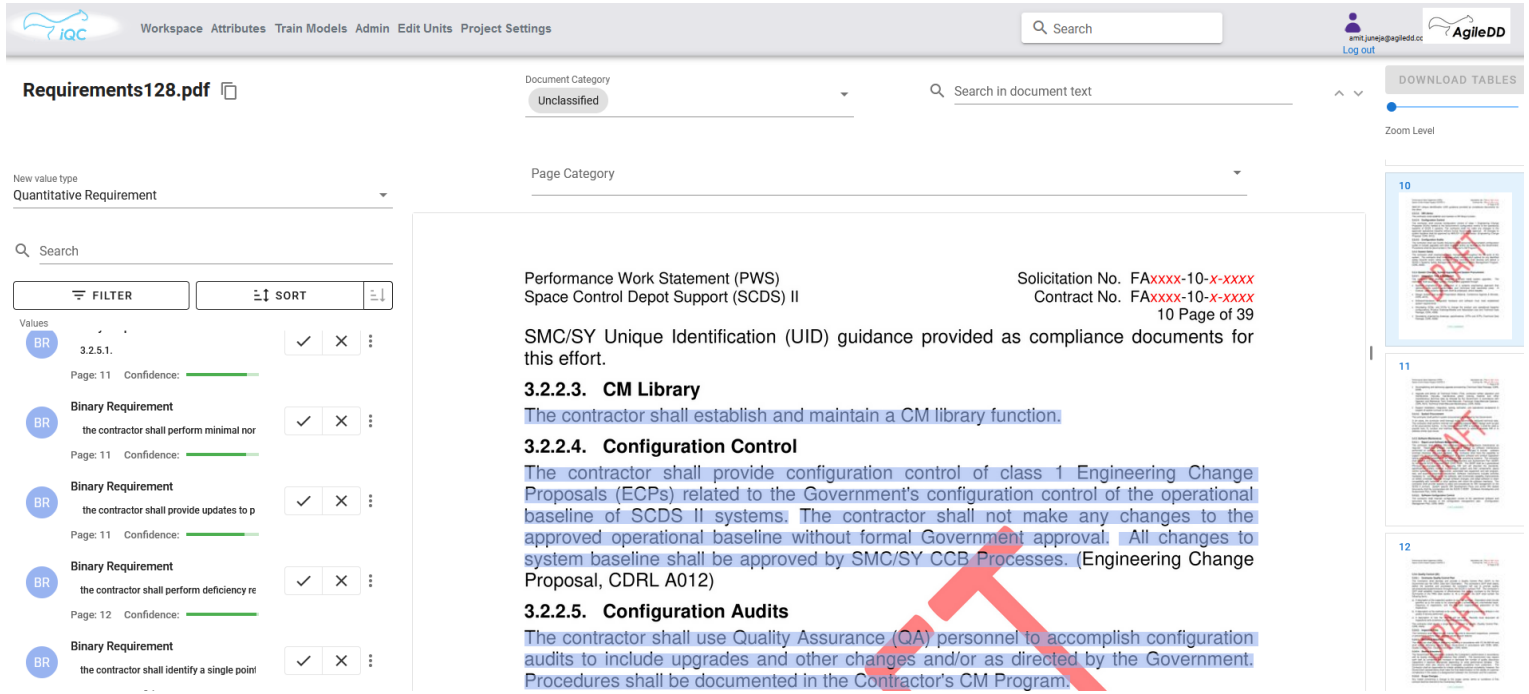
Air Force STTR Phase II

Developing a tool for acquisition and test and evaluation analysts to:

- Capture binary and quantitative requirements from unstructured acquisition documents
- Capture test parameters, thresholds and objectives from quantitative requirements
- Automatically generate the Test and Evaluation Master Plan (TEMP) and provide links to source documents
- Reveals significant connections and discrepancies between different document versions
- Enable analysts to more easily identify patterns and significant gaps
- Will deliver prototype by FY24 Q1
- Work being performed under STTR Phase II contract with AFWERX for US Air Force Test and Evaluation

In partnership with University of Illinois Urbana Champaign and Aviar Technology LLC

Reach out for demo!



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*"AgileDD.ai is relatively unique with their **patented approach for modeling the extraction process in the visual plane of a document, rather than treating a document as a sequence of words reading from top to bottom.** Furthermore, any acceptable solution also has to be attuned to the semantics of the particular documents' business domain, jargon, nuances, terminology and the user's objective. This venture is on the right track."*

MITRE