

Protocol Intelligence Advancement through AI

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PROBLEM STATEMENT

Our mission is to answer questions & simplify protocols...
 Compared to peers, do our clinical trials include **more/longer visits, more procedures and invasive procedures** per visit?

This information could be found on the 'Schedule of Activities' table of each PDF protocol. We develop **generalizable** capability to automate **measurement** of such protocol study design elements and **provide actionable recommendations** for TAK-279.

North Star - Putting patients first
 Streamline clinical trials, to **alleviate patient burden**, reducing operational costs and improving speed to insights

DATA

Structured

Metrics from ClinicalTrials.gov

500k+

Protocols available

Unstructured

Clinical Trial Protocols

16 protocols

relevant to TAK-279, with manual extraction of the Schedule of Activities table

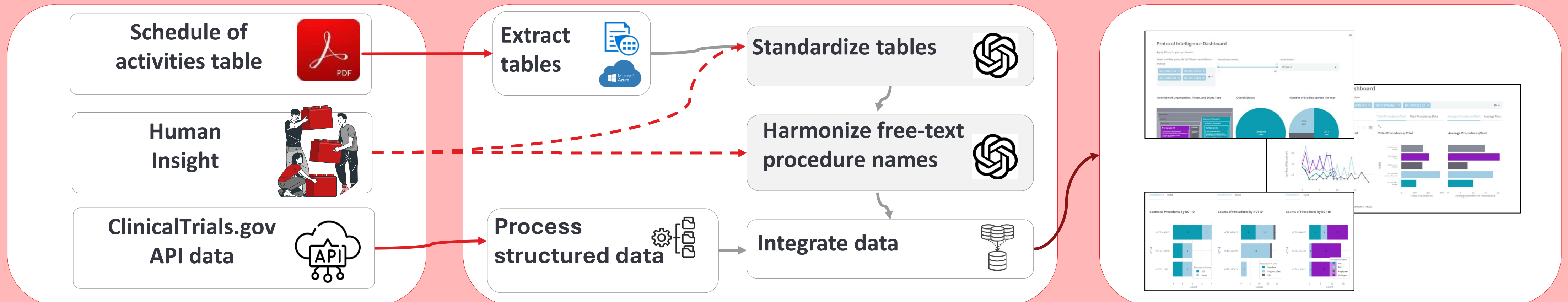
Human insight

METHODOLOGY

Input

Processing

Insights



Performance Experiments

Table Standardization over 16 protocols

To extract and standardize the tables, we extract the unique row/procedure, column/weeks, and checkmarks (which procedures occur in which week)

Weighted accuracy: Checkmark Accuracy x Row x Column

	Weighted Accuracy	Checkmarks Accuracy	Row Accuracy	Column Accuracy
Median	89.1%	92.9%	96.6%	97.1%

Harmonization of free-text procedures over 8 protocols

We perform targeted Schema Matching to break down the user's specific selected procedures across different competitors, highlighting the distribution and frequency of various procedures with bar charts

	Weighted Accuracy
Median	80.1%

BUSINESS IMPACT

Key results & Deliverables

User Time Saved in a 7-hour manual task, digitizing 14 protocols
 Potential for saving up to 400hrs /year

3h 25 min

Time Saved

-48%

Percentage

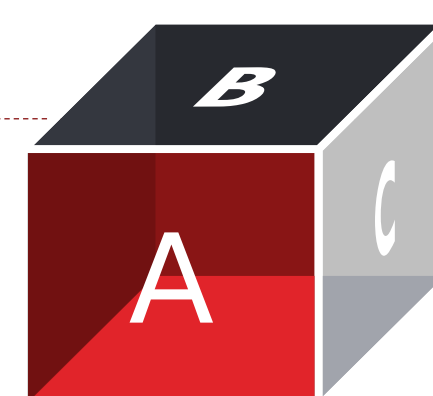
We provided actionable recommendations for TAK-279

Findings have been shared with the study team

1 novel solution for 3 critical tasks

Application users can:

- Find** the most relevant competitor protocols to current study
- Extract** the SoA table from protocols
- Benchmark** protocol procedures against the competitors'



Next Steps

- Automate the identification** of schedule of activities tables
- Expand data sources** within protocols to improve accuracy
- Integrate data from external sources** e.g., journals
- Unite pipelines** that classify procedure invasiveness, and calculate time

