DataInFormation℠

Solutions Brief

*With our flagship **DataInFormation℠** suite of solutions for Image Labeling, Data Annotation, NLP Calibration and Form Data Capture, Liberty Source is proud to serve a wide range of clients across many industry verticals. Our **Solution Briefs** provide a snapshot of the challenges clients bring to us, and the outcomes we achieve for them.*

Product Reference Search Tool with Attention Layer

Industry	Data Type
Financial Services / Insurance	text
Project Duration	**Ongoing?**
1 month	No

Challenge

An insurance carrier had implemented an in-house search tool to facilitate employee access to its product reference manuals. However, administrators noted that users rarely typed full questions using English language syntax. The data science research team determined that adding an attention layer could convert these partial questions into the correct syntax, thereby increasing the performance of the search tool.

Solution

Data Associates were provided with raw syntax and 20 machine-generated questions for each search query. They selected all the machine-generated questions that used the correct syntax and then created 3 additional questions using the full and correct syntax.

Outcome

Selecting the correct machine-generated questions and adding additional examples strengthened the attention layer so that it could accept partial / poorly structured user queries and consistently output strings which the search tool could correctly interpret – thereby increasing the usage of the product reference manuals.

https://liberty-source.com

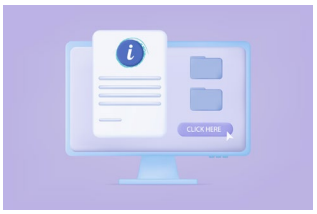
LIBERTY SOURCE

(757) 251-7482
sales@liberty-source.com

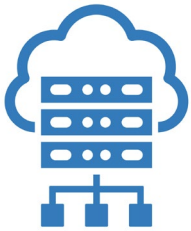
DataInFormation℠

Solutions Brief

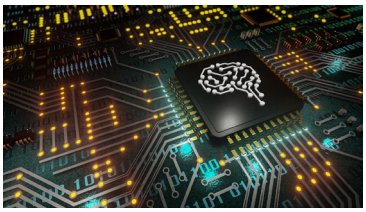
Product Reference Search Tool with Attention Layer



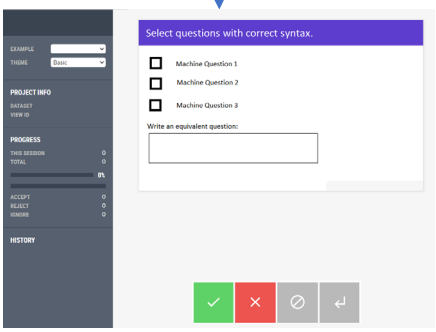
*Company Product Manuals as **HTML** for user to search like an internal search engine.*



Query data saved from user searches



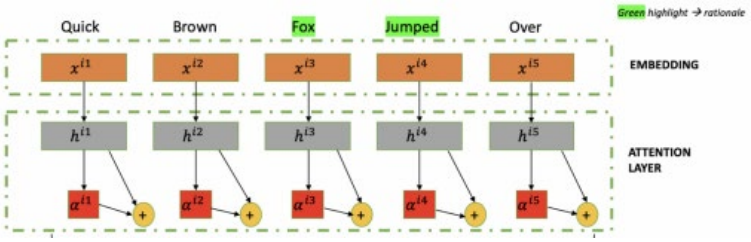
Machine learning model generated 20 questions from user search syntax



*Questions uploaded to platform with a custom recipe for **Data Associates** to annotate questions similar to what a human would write. Additionally, the user was able to write questions for the model to learn from.*

Indicates 'human-in-the-loop' process flow

A knowledge layer is now created to convert low quality user input to high quality questions that a question/answer ML model can better interpret.



https://liberty-source.com

LIBERTY SOURCE

(757) 251-7482
sales@liberty-source.com