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Quantum Query Comparator (Q2C) Overview

Transcending Textual Boundaries with Advanced NLP

Introduction to Q2C

- Advanced NLP chatbot
- Analyses and compares semantic essence of queries
- Utilizes cutting-edge NLP for accurate responses

ROAD-MAP

STEP 1

Preliminary Planning & Research

STEP 2

Data Collection & Processing

STEP 3

Model Selection & Prototyping

STEP 4

Training & Deployment

Challenge & Solution

Challenges Addressed:

- Conventional systems falling short in deciphering user intent due to reliance on keyword matching

Objectives:

- Establish semantic similarity understanding for contextually relevant responses

Exploratory Data Analysis

- Ratio Analysis
- Length Distribution
- Special Characters
- Common Words Analysis
- Unigrams Length Analysis

Data Engineering

- Lowercasing
- Removing Stop Words
- Removing Punctuation Marks
- Stemming

Model Selection

TF-IDF

- Provided basic semantic understanding by identifying term frequency and relevance
- Unable to capture context and deeper meanings, resulting in suboptimal performance

BERT

- Offered advanced contextual understanding
- Computational intensity
- Longer processing times
- Substantial data and computational resources required

FastText

- Improved semantic understanding with cosine similarity.
- More computationally efficient than BERT

DEPLOYMENT

1. Successfully deployed as a Telegram bot
2. Integrated FastText with cosine similarity for efficient and accurate semantic analysis
3. Users can interact with the bot in real-time on the Telegram platform
4. The bot understands and responds to queries with contextual relevance
5. Provides a convenient and accessible way for users to engage with sophisticated semantic analysis technology

Users feedback

Users likes the Quantum Query Comparator for swift responses on Telegram, praising its precision in semantic analysis and efficient FastText integration. Positive feedback extends to the system's adaptability and accessibility within Telegram

Thanks for attention