

HistoChatbot: Educating History by Generating Quizzes in Social Network Services

Yasunobu Sumikawa
Takushoku University

Adam Jatowt
University of Innsbruck

Introduction

Motivation:

Studying and analyzing historical data can provide numerous benefits: comprehension of the past, analogies over time, and so on.

Contribution:

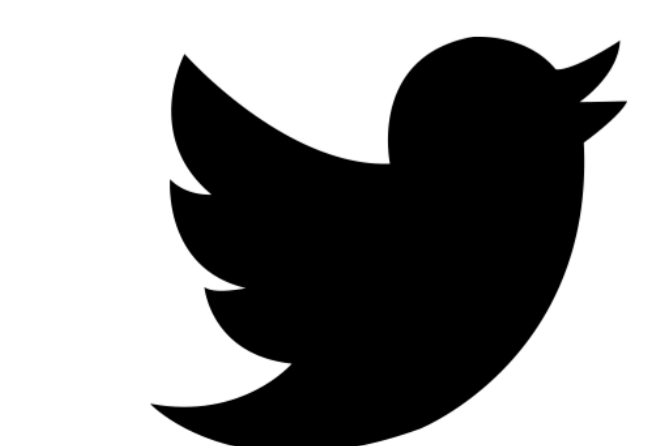
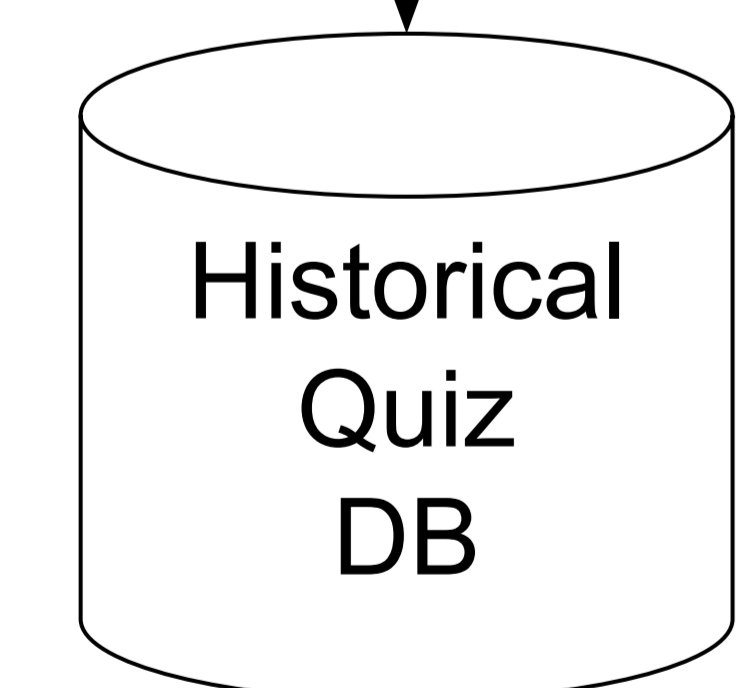
Our system recommends history-related content in a customized way *according to the estimated interests of users*



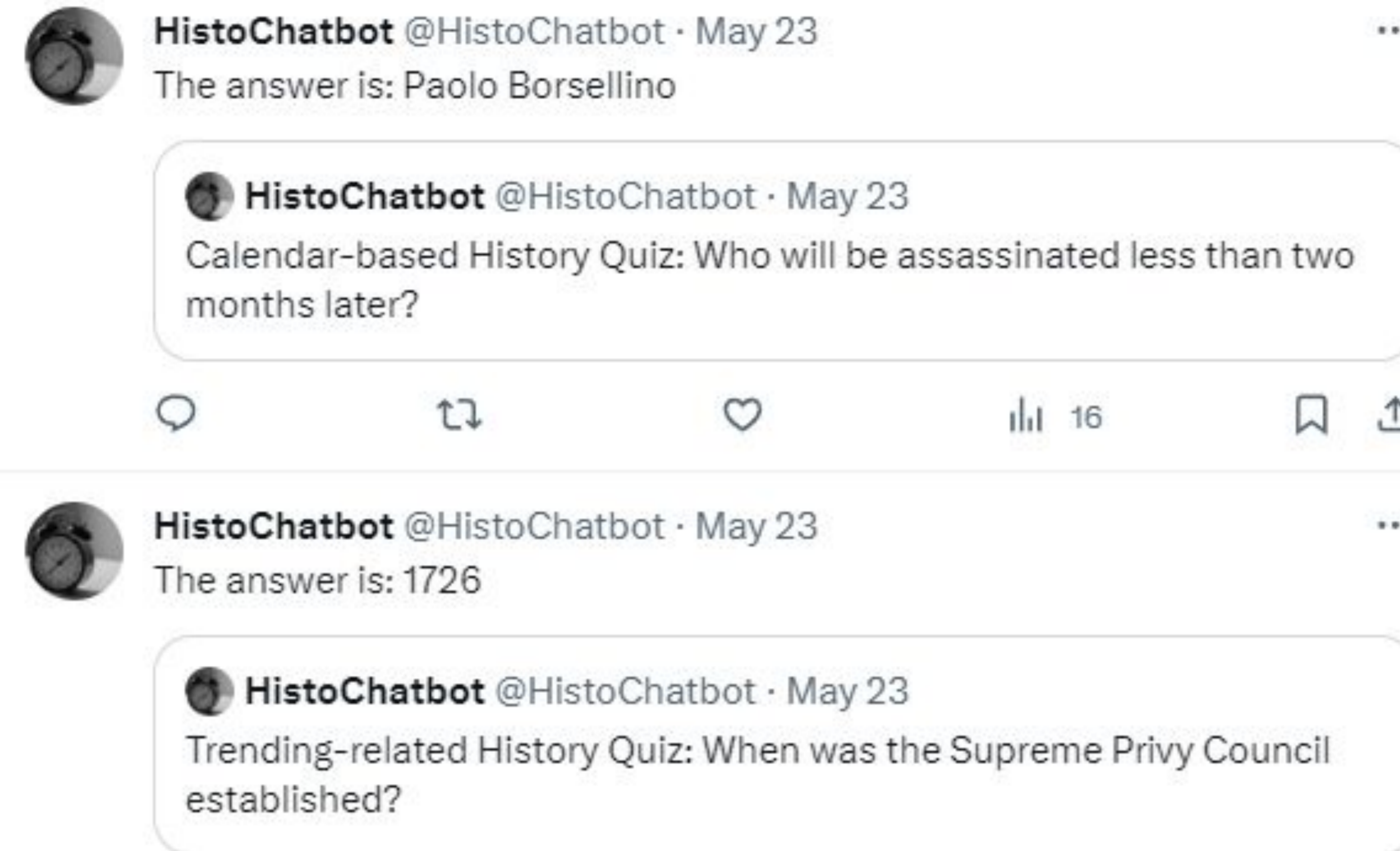
stores past events
Period: 1AD to 2019AD
Pages: January 1 to December 31.

Num. of event: 71,374

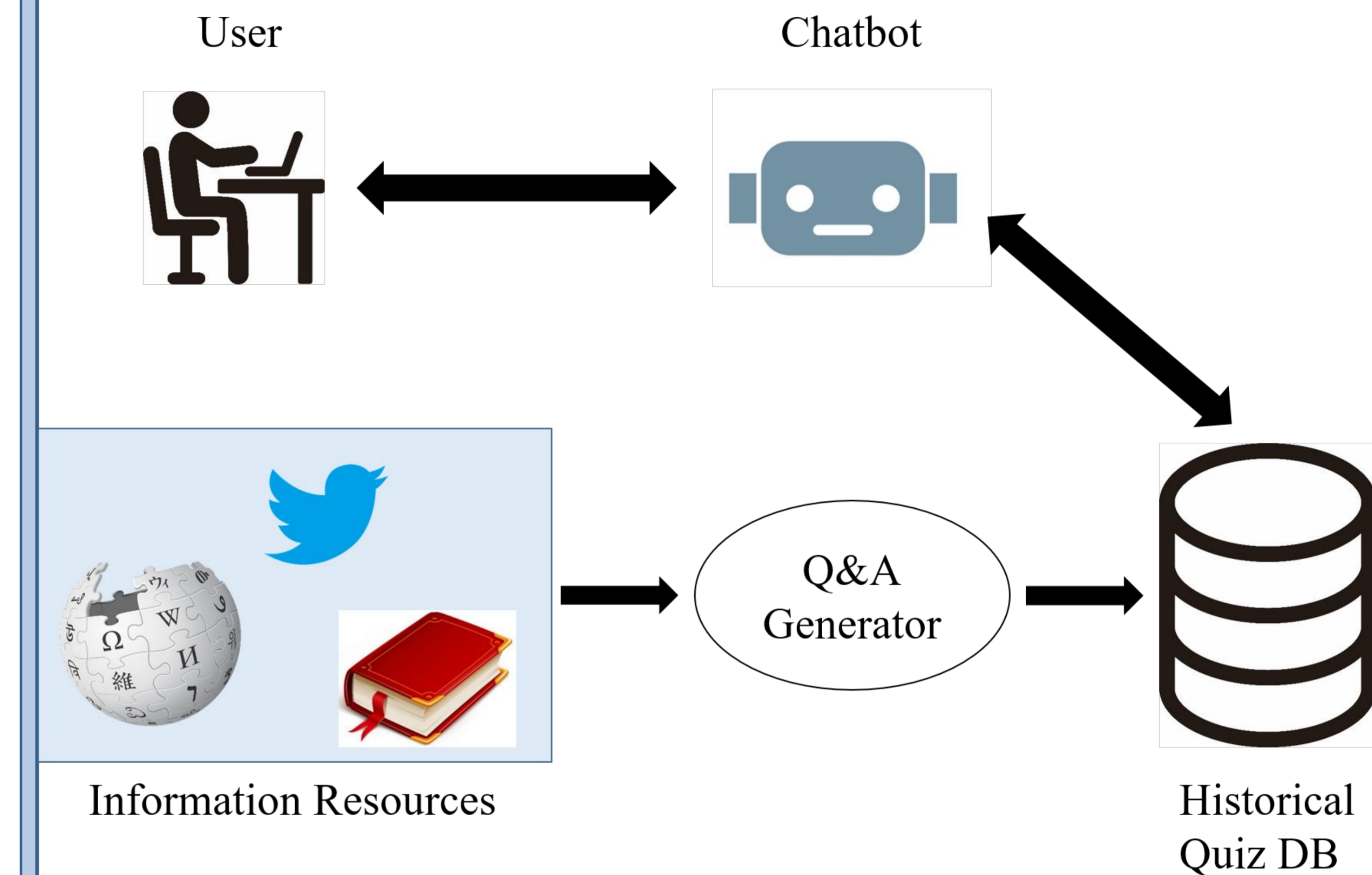
share history-related content
with large numbers of users



Snapshot of system interface



System Overview



Algorithms

- Calendar-based Quiz Mode**
The chatbot posts quizzes about past events that occurred on the same calendar day in the past.
- Current-news-based Quiz Mode**
This mode outputs content about past events which are similar to the current events. To collect data on the current events, we created a list that includes Twitter official accounts of multiple news companies including CNN, BBC, NYT, and others
- Trending-words-based Quiz Mode**
Twitter lists words that many users were recently interested in by indicating them as trending. We use it to post quizzes that users may be potentially interested in.
- Entity-based Quiz Mode**
We describe now our last work mode. Its idea is to post quizzes corresponding to users' requests. If a user wants to receive questions about particular entity, she can request a related quiz about that entity.

Evaluation

- Q&A generator**
95 out of 100 generated quizzes as correct.
- Quiz selection**
 - We prepared 100 random texts for each of the three modes
 - 72.7% success rate over the 300 produced quizzes.
 - We found that incorrect quizzes were often chosen when the entity or trending word was not uniquely defined (e.g., Amazon)

Conclusions

We have described a framework for designing responsive chatbot systems that post history-related quizzes in SNSs. In future we will measure event popularity (e.g., with statistical approaches similar to) to better select content for dissemination.