

DGLab Question Answering System & Automatic Evaluation Method at NTCIR-13 QA Lab-3 for University Entrance Exam on World History Essay

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Contribution

- Pragmatism: rapid prototyping & benchmarking
- Utilize highly accessible toolkits & data
 - Loosely coupled pipeline
 - As minimal as possible
- 1st Place in terms of expert & Pyramid scores on Japanese

Long Essay Question (P792W10-1)

- ... discuss the changes that Russian foreign policy had on the international situation throughout Eurasia from the Congress of Vienna to the end of the 19th century, noting how the western powers responded. ... Use each of the 8 terms below at least once...
- Afghanistan, Ili region, Primorye, Crimean War, Treaty of Turkmenchay, Berlin Conference (1878), Poland, Port Arthur

Retrieve

```
#combine(
#1(Afghanistan)
#1(Ili region)
#1(Primorye)
#1(Crimean War)
#1(Treaty of Turkmenchay)
#1(Berlin Conference 1878)
#1(Poland)
#1(Port Arthur)
)
```

Minimal

Select

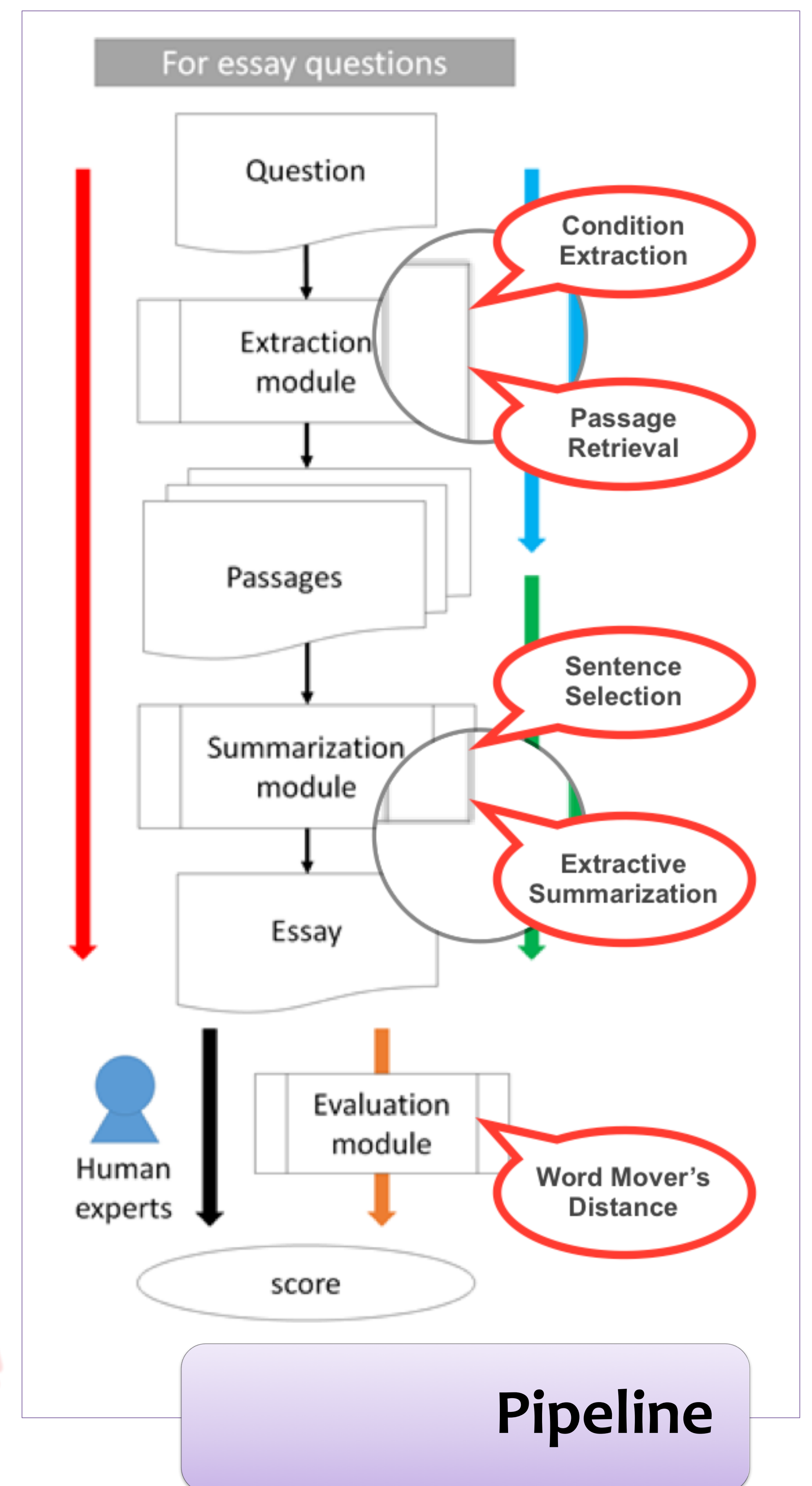
```
• Segment sentence
• ja: regex
• en: Stanford CoreNLP
• Filter
• sort by Precisionkeyterm(sentence)
• select
• Top-7
• ≤10 × answer length limit
```

Heuristics

Summarize

```
• ja: Shuca (Knapsack)
• Juman
• KNP
• en: LexRank
```

Accessible



Limitation (L792W10-1)

- ... describe the role of the Netherlands and the Dutch people in world history, from the late Middle Ages to the modern day, when integration is extending beyond national lines...
- Grotius, coffee, Pacific War, Nagasaki, New York, Habsburgs, Treaty of Maastricht, South African War

recall

Sentences of the summary:

- Karl V united Netherlands 17 states under the House of Hapsburg's ruling.
- The ports of New York and Boston prospered as slave trade port.
- South African War is also known as Boer War.
- ... took effect the European Union Treaty (Treaty of Maastricht)... in 1993, and European Union (EU) established.
- Roma Treaty... EC constitution in 1992 ... Treaty of Maastricht (European Union Treaty) ... in '93
- With the start of Pacific War, not only Germany and Italy have declared war against the U.S... the Axis of Japan, Germany, and Italy... the U.S., the U.K., and Soviet Union...
- ... on December 8, 1941, Japan made a surprise attack on Hawaiian Pearl Harbor, and declared war against the U.S. and the U.K., so Pacific War (Asia-Pacific War) began.
- However, when the Pacific War (Asia-Pacific War) began, ... had to wait for end of the war to become independent.
- In hamburger and coffee shops developed in a global scale...

relevant: New Amsterdam?

relevant: Dutch Boer?

coherent

concise

relevant

FAQ in situ: why is the system better than others in Japanese?

- (Probably) character-based Indri indexing, although the character-based part is quite counter-intuitive.
- For long essay, NOT using any information from the question (highlighted words) increase passage precision.

Comment?