

Biomedical Question Answering System (BioASQ)

11693 - Team 5

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Yichen Cai
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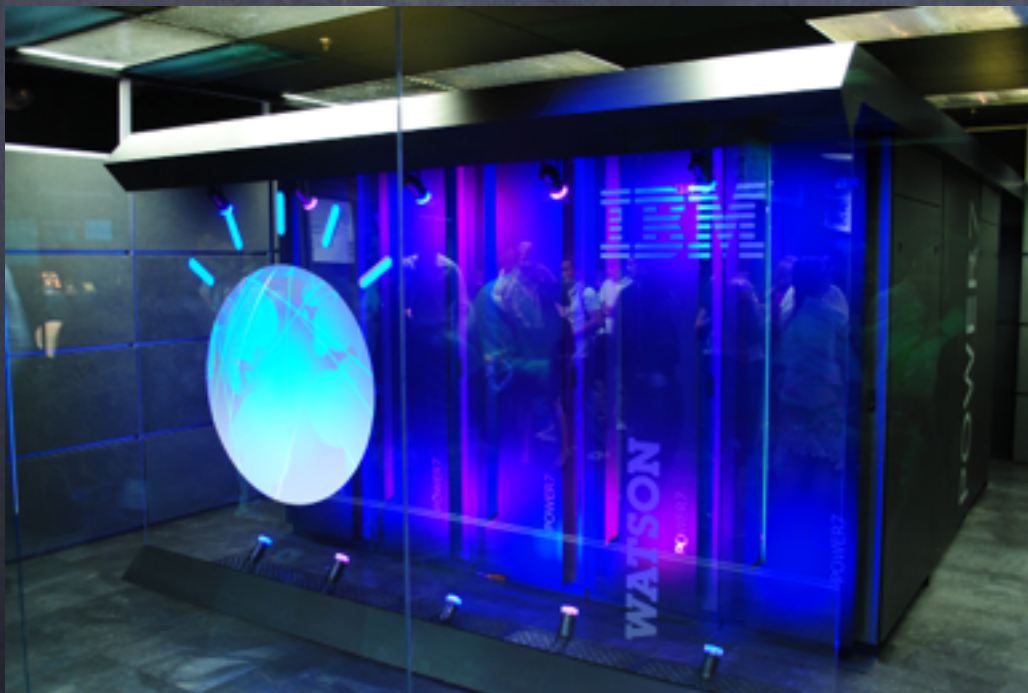
Introduction

What is Question
Answering System (QAS)?

Question Answering System (QAS)
is a system that automatically
answer questions posed by
humans in natural language

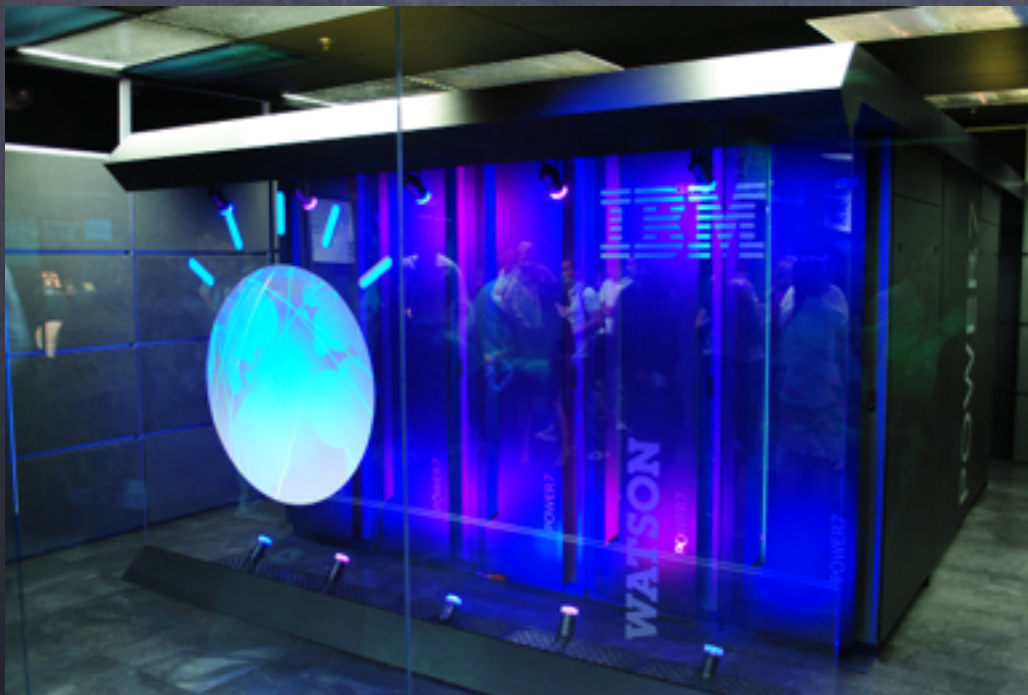
What is Question Answering System (QAS)?

- IBM's Watson



What is Question Answering System (QAS)?

– IBM's Watson



en.wikipedia.org



www.geeky-gadgets.com

– Apple's Siri

What is Biomedical
Question Answering System
(BioASQ) ?

Types of biomedical questions

- **Factoid Questions**

e.g. "Where in the cell do we find the protein Cep135?"

- **Yes/No Questions**

e.g. "Are there any DNMT3 proteins present in plants? "

- **List Questions**

e.g. like "Which forms of cancer is the Tpl2 gene associated with? "

- **Summary Questions**

e.g. "What is the mechanism of action of anticoagulant medication Dabigatran? "

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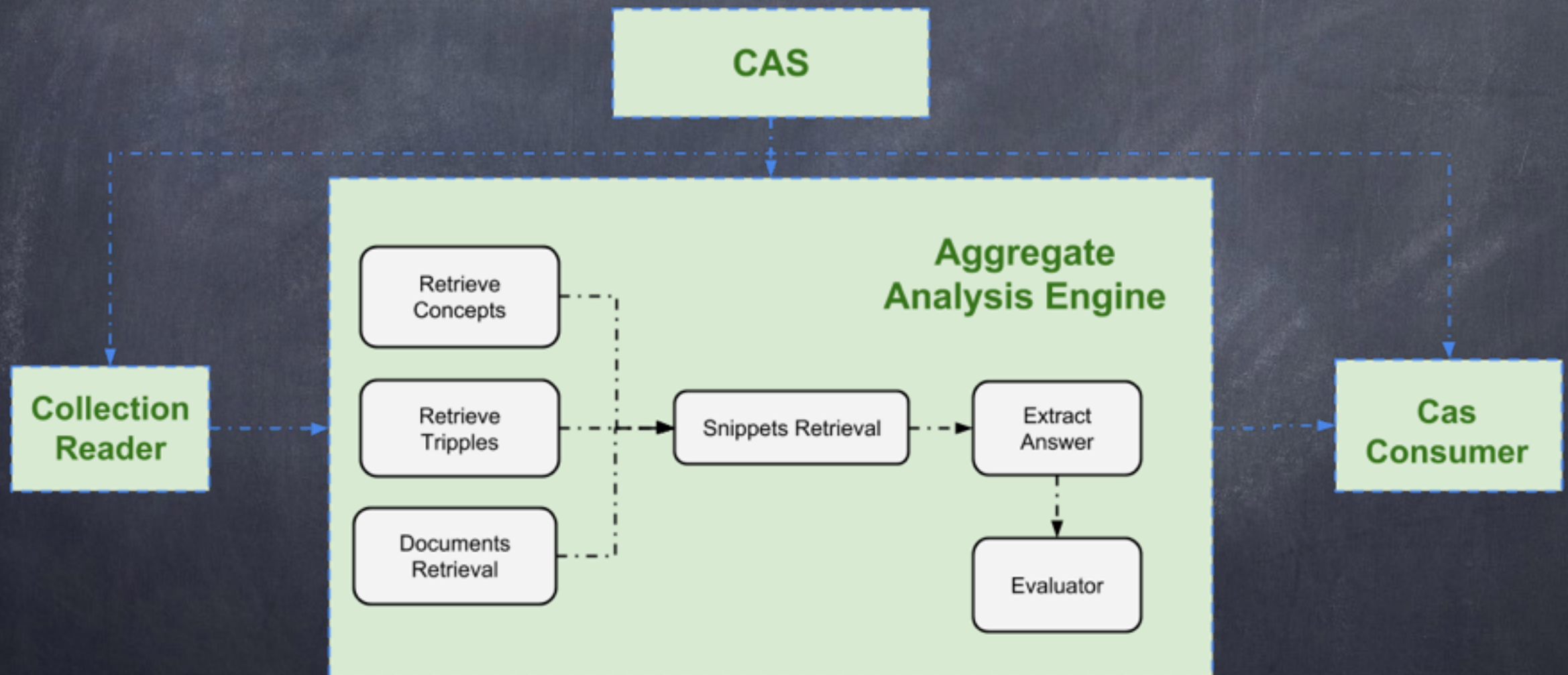
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Method

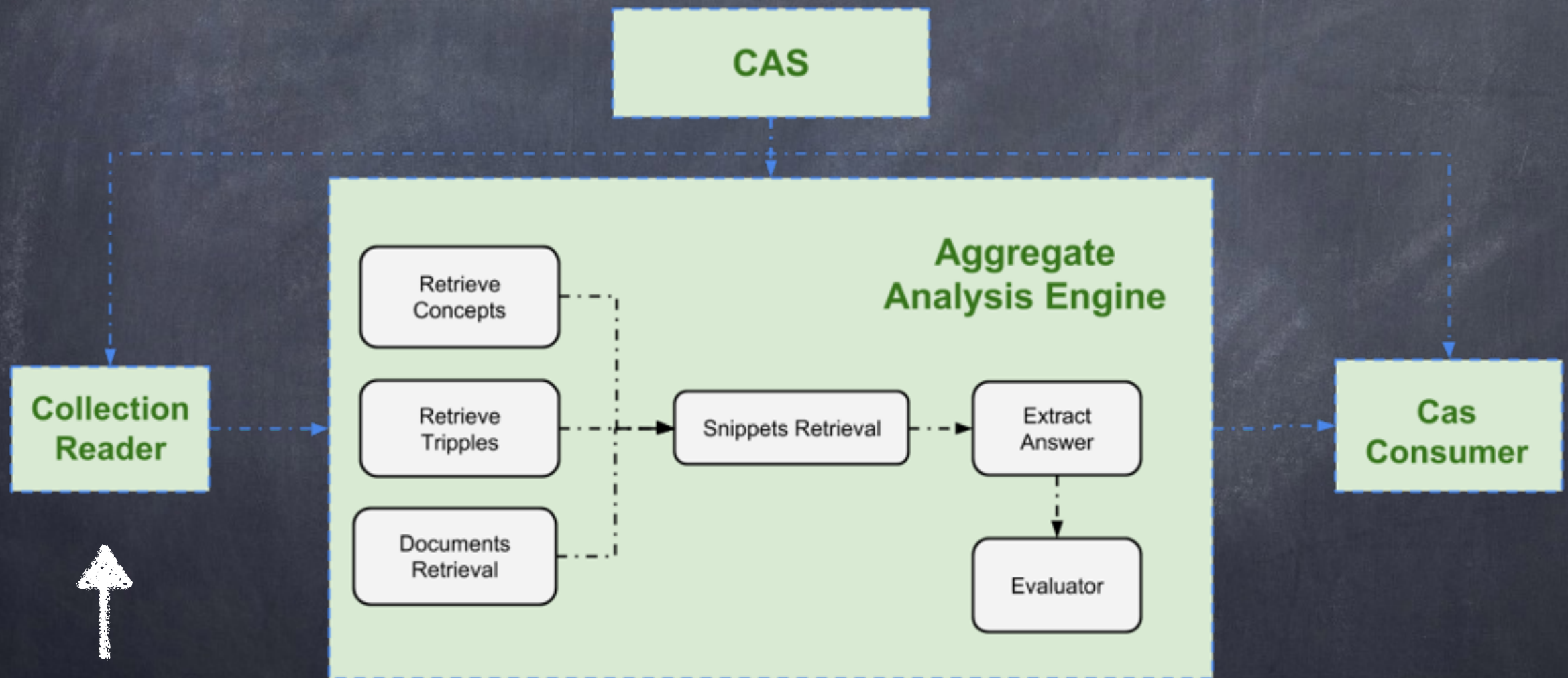
• Building a Pipeline for Biomedical Question Answering System (BioASQ)

- Unstructured Information Management Architecture (UIMA) Framework



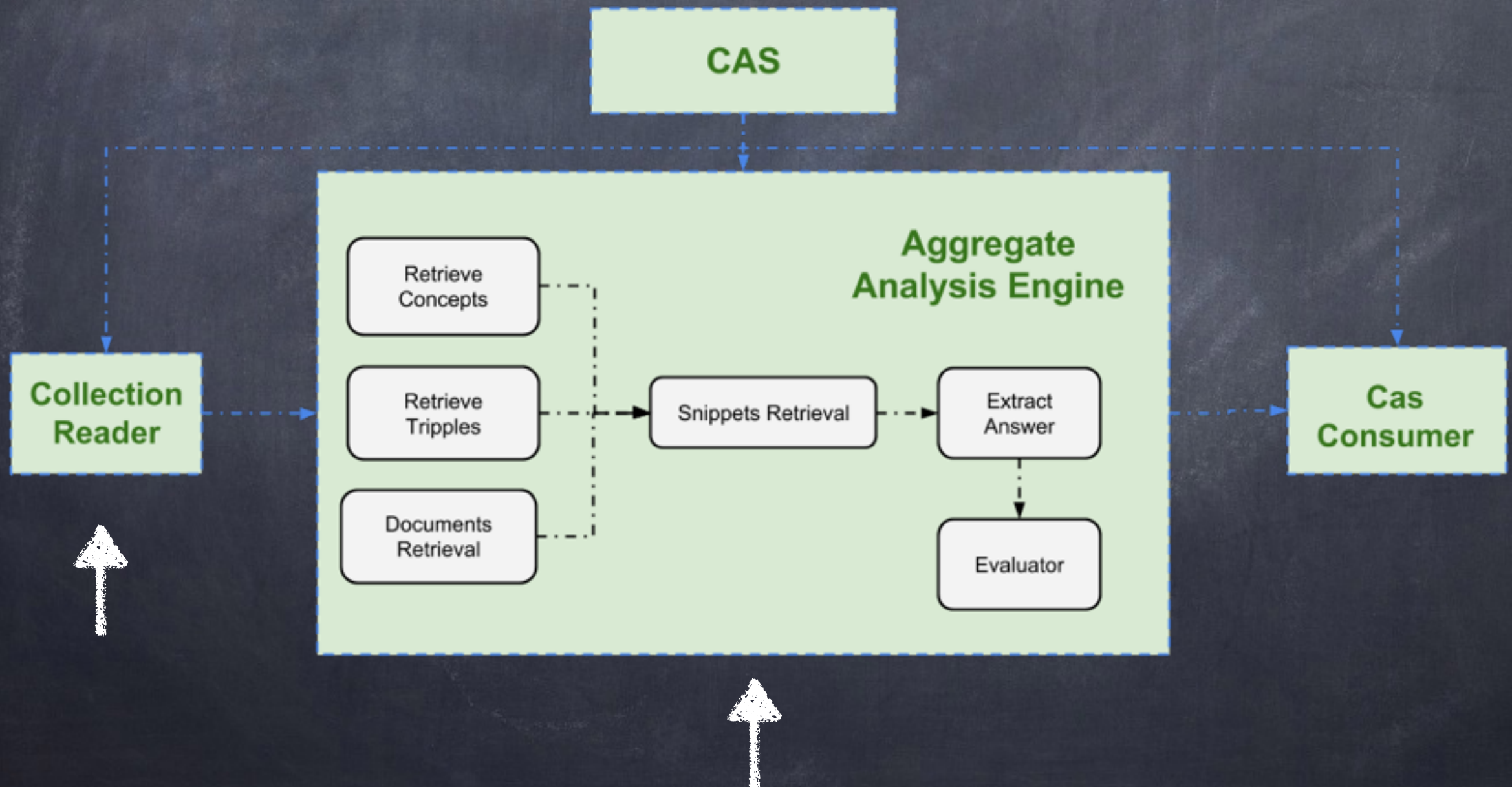
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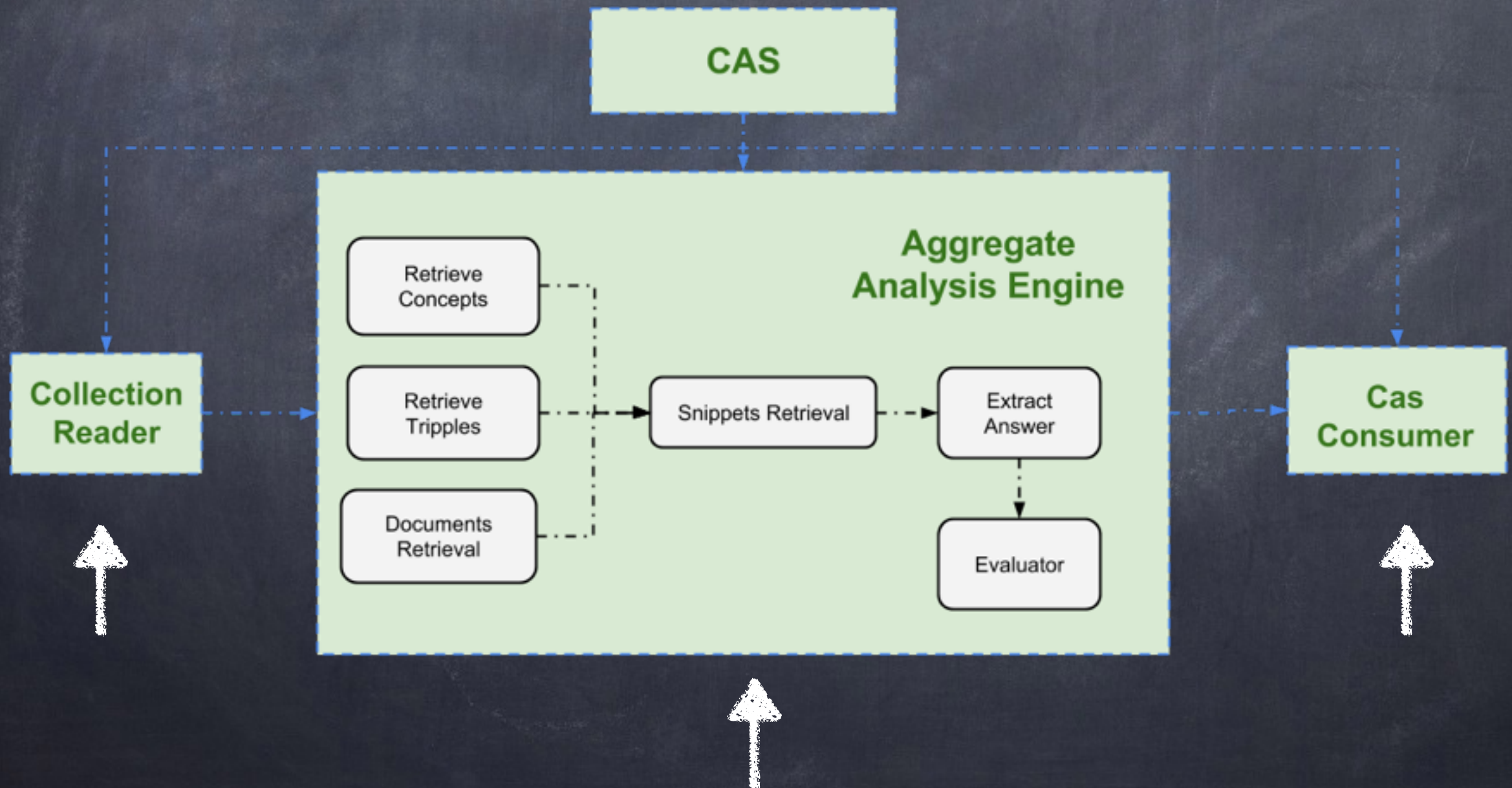
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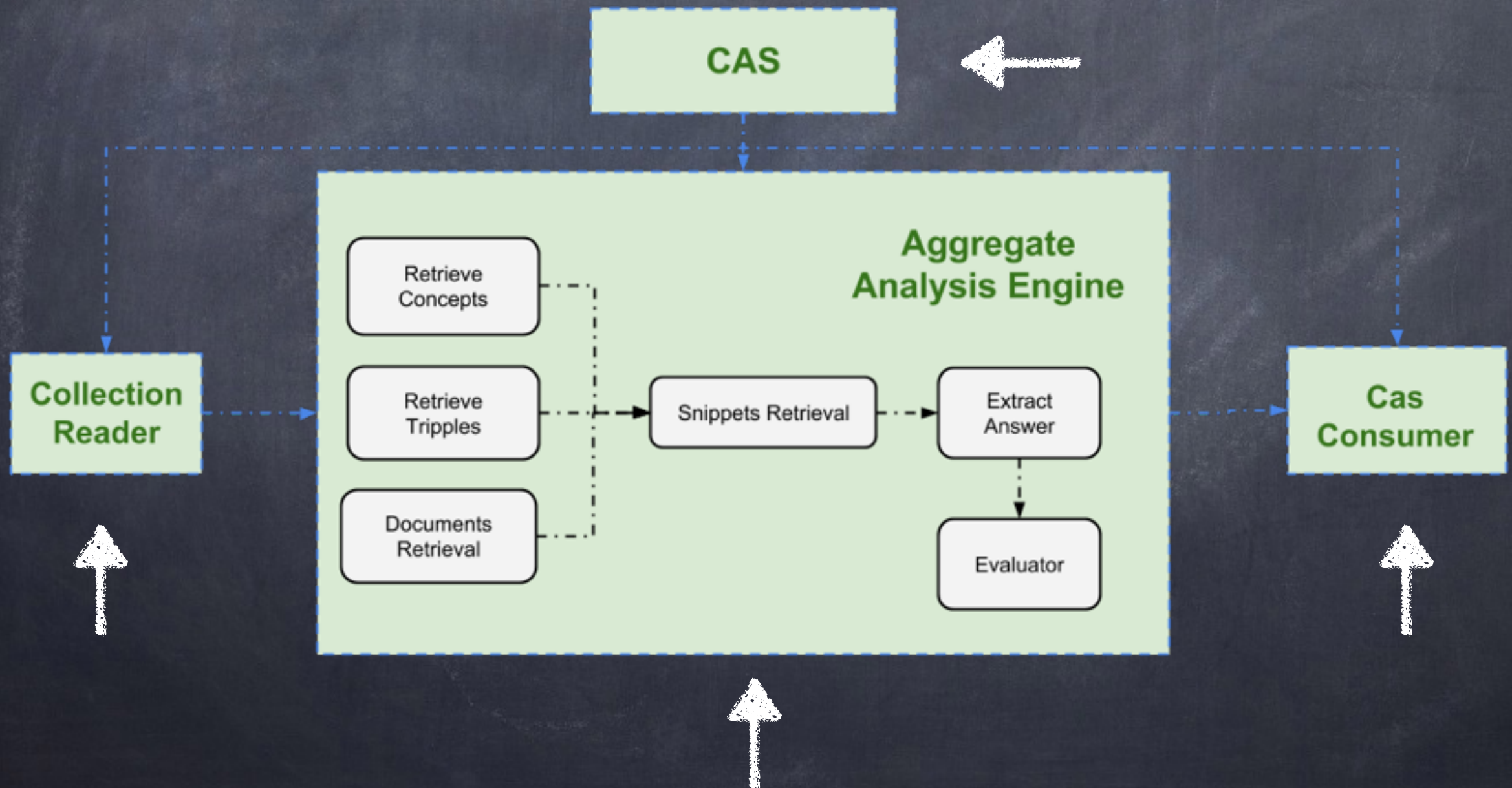
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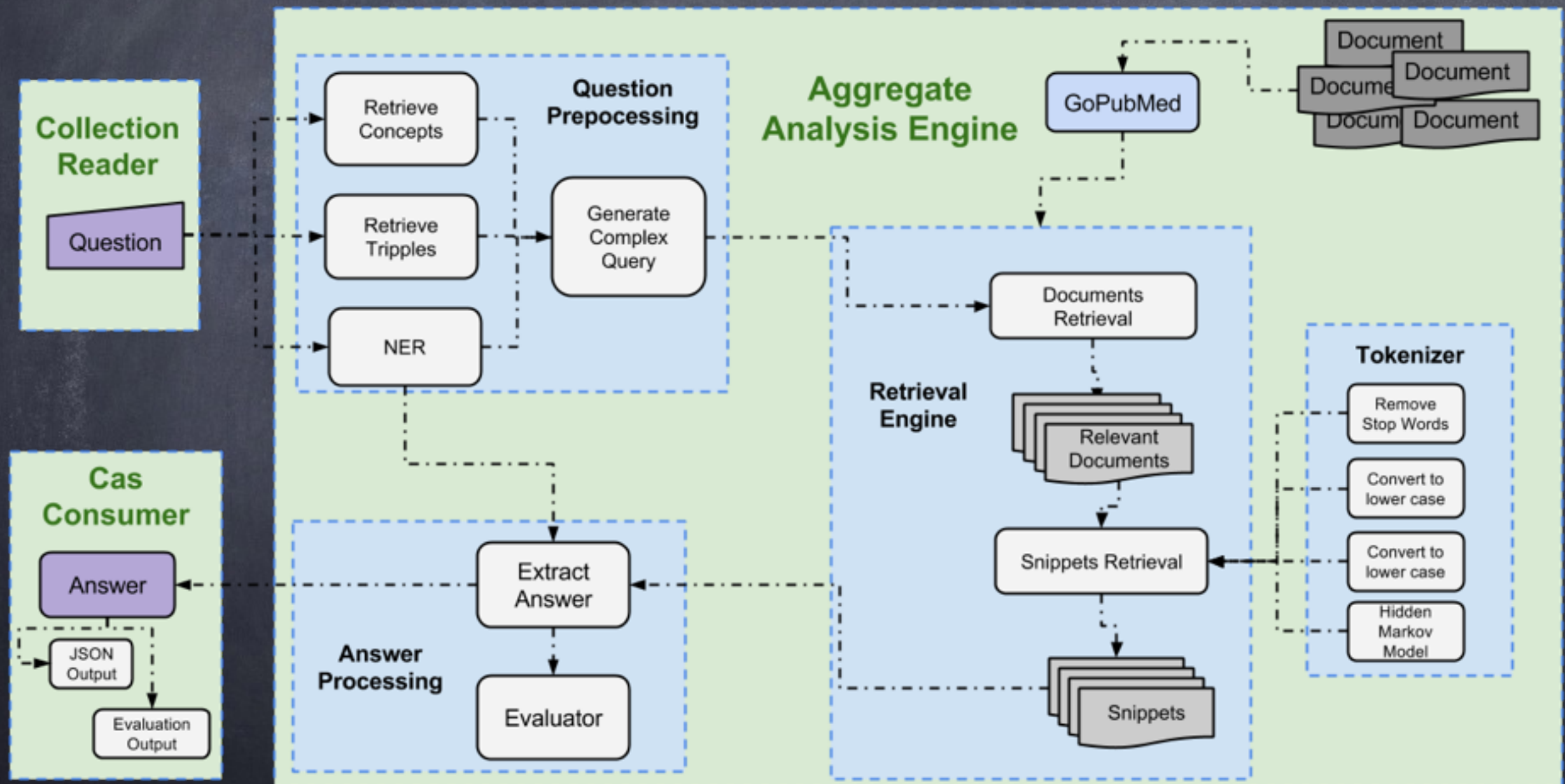


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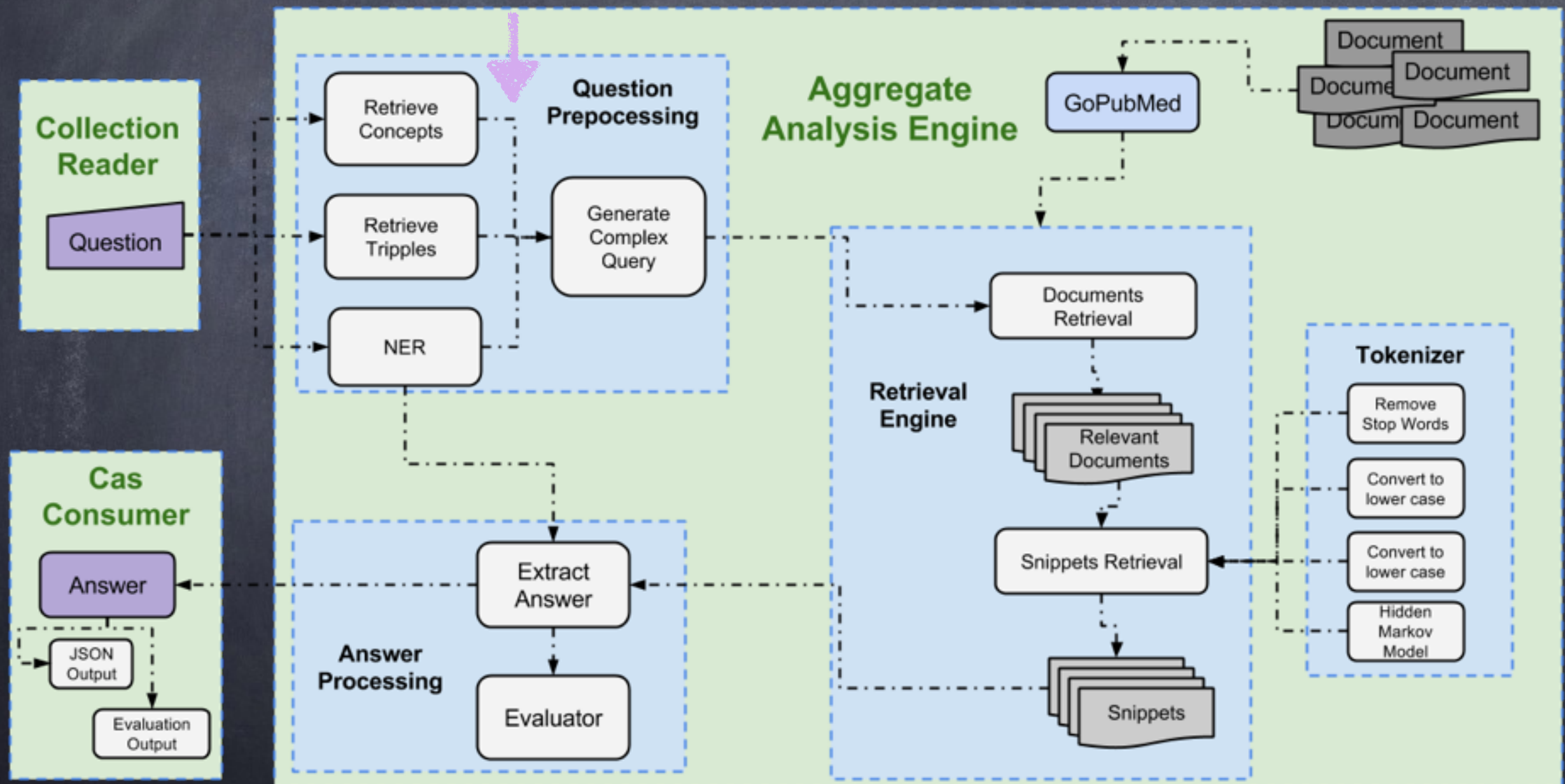
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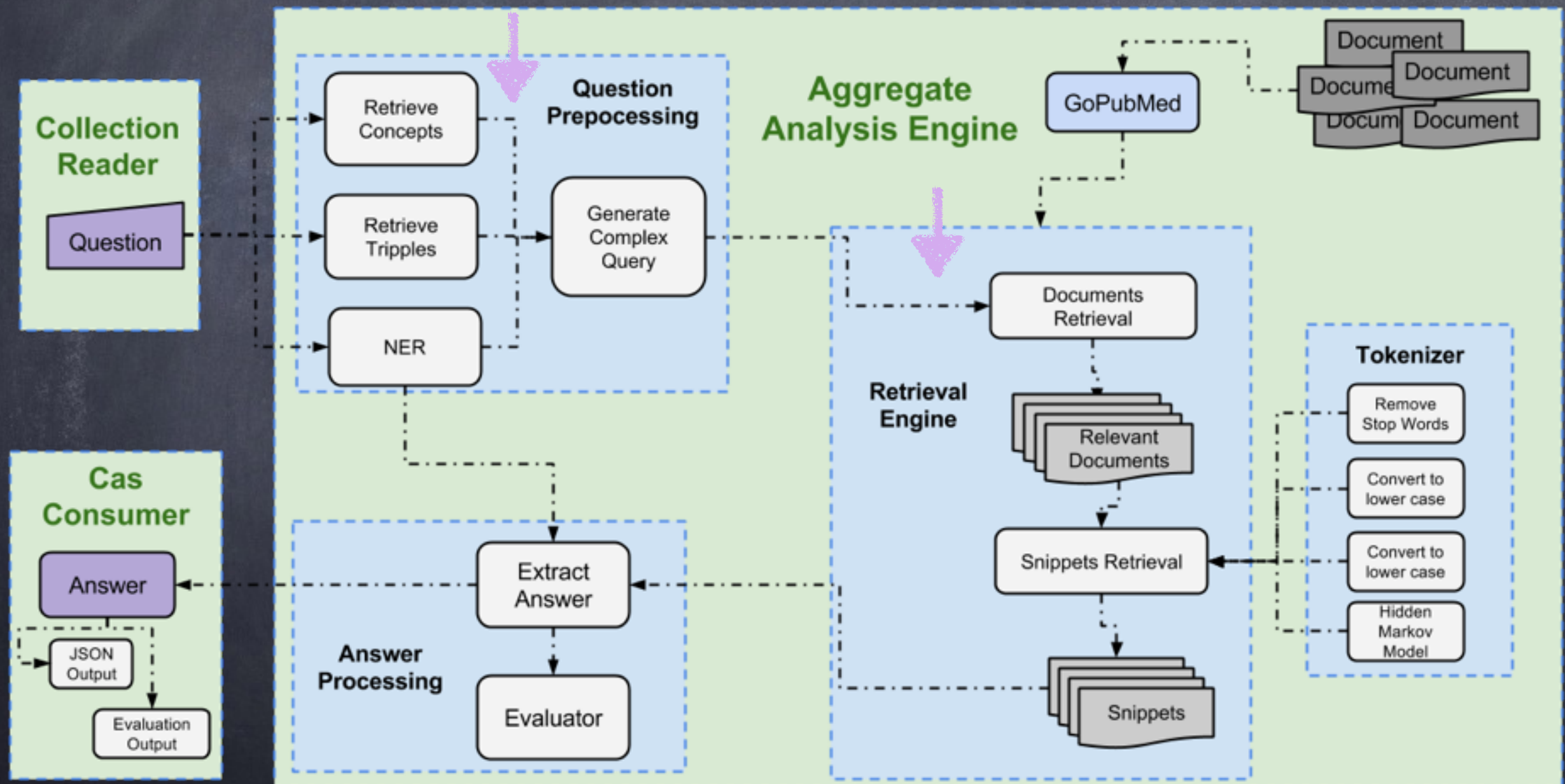
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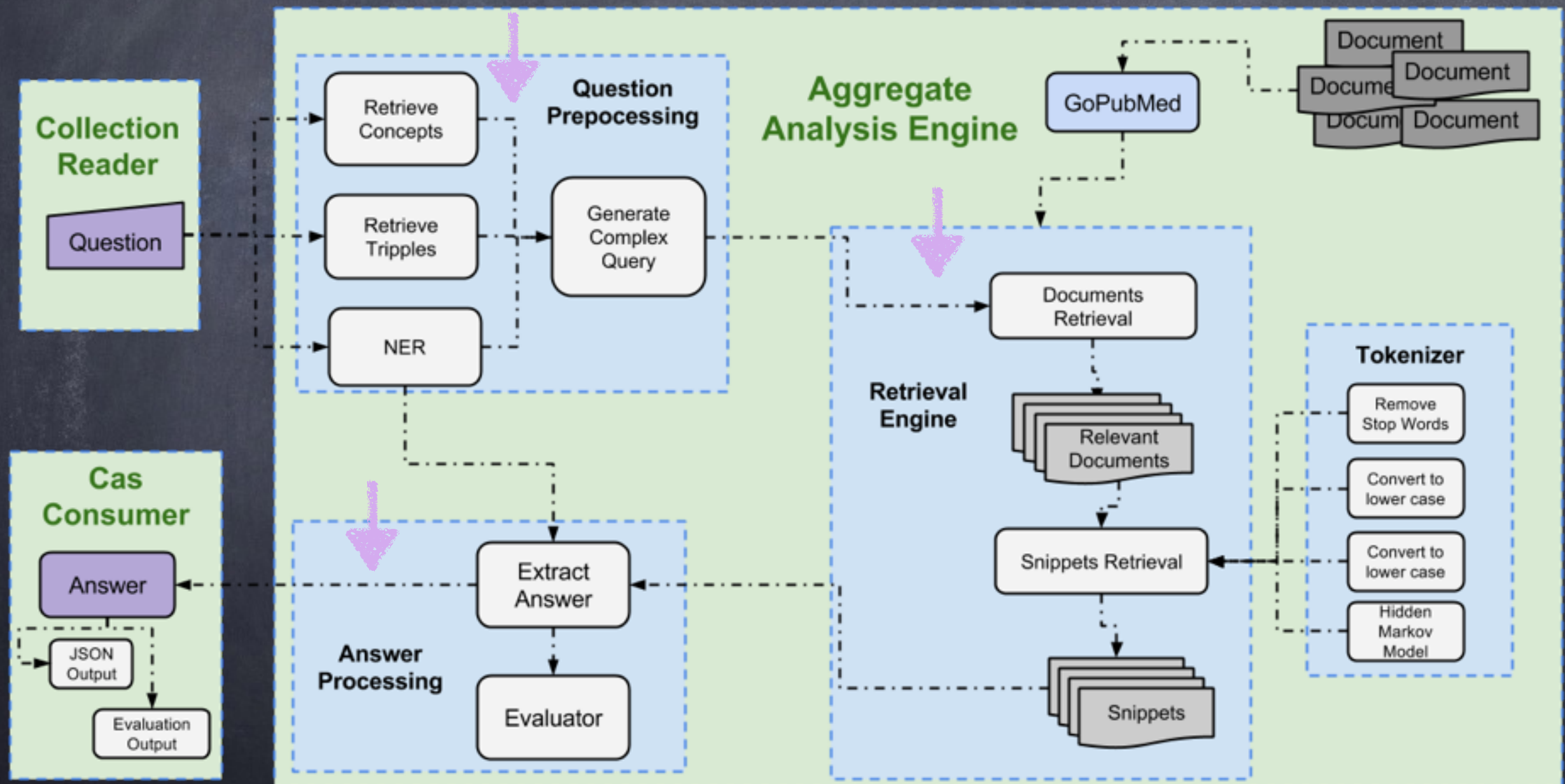
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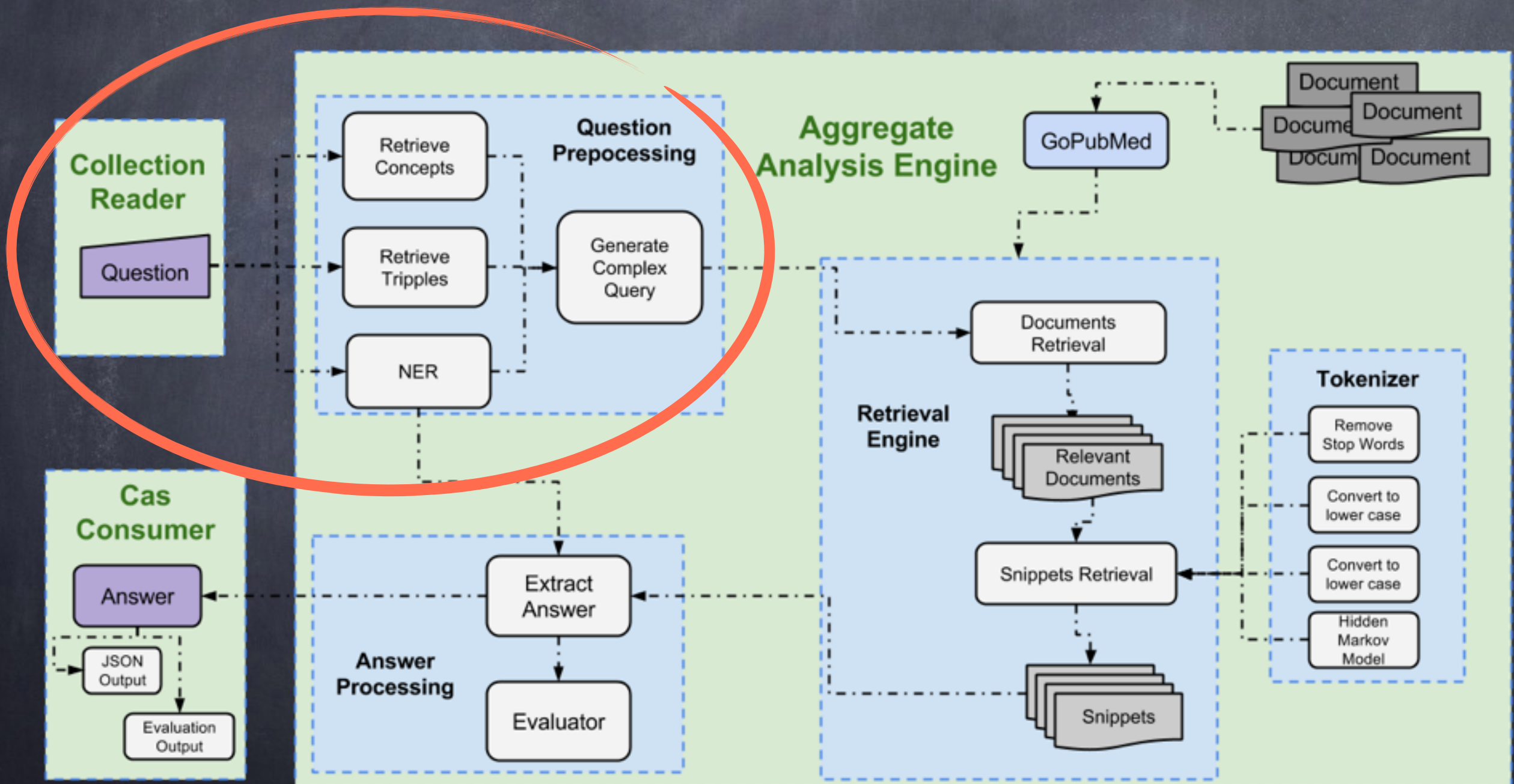
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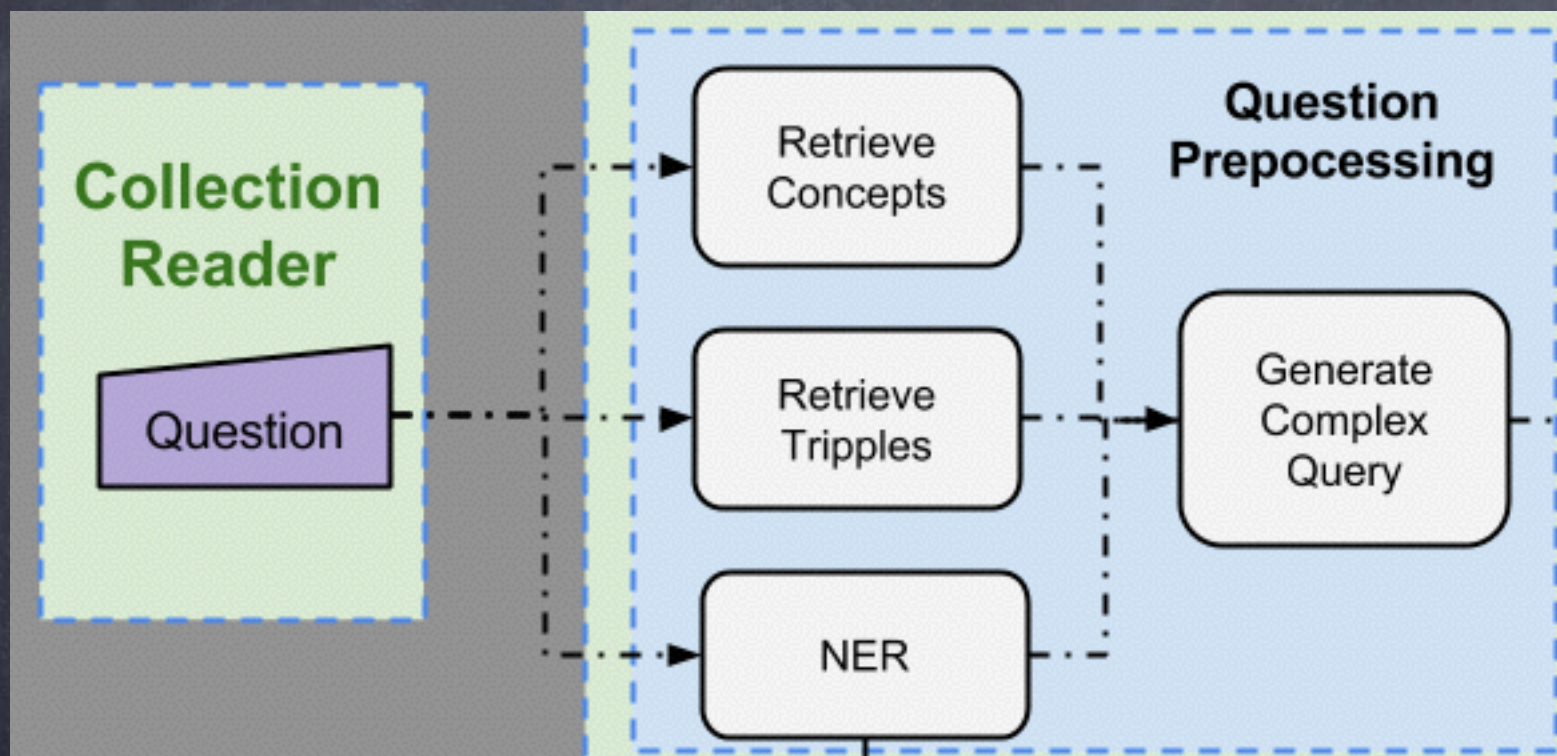
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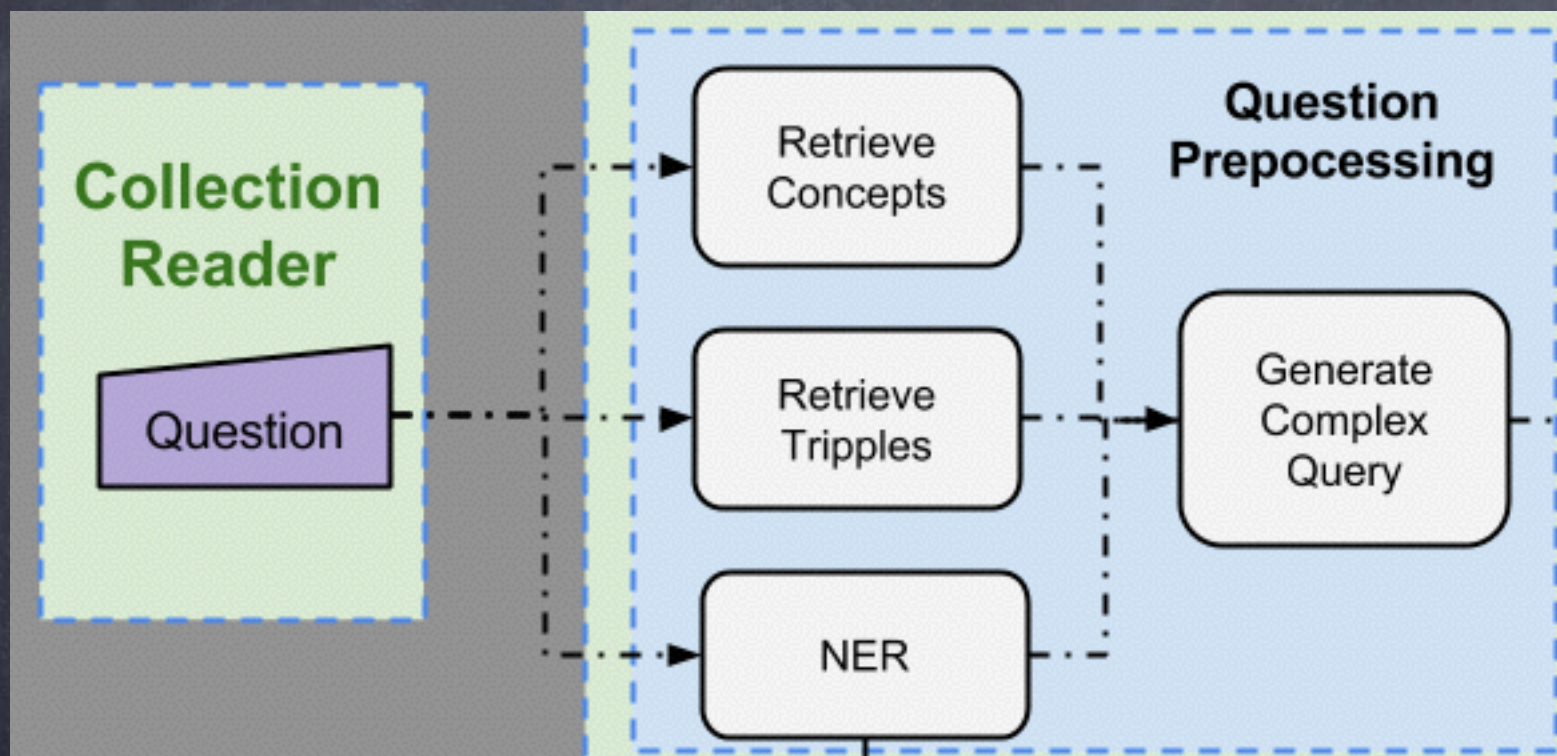


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1. Question preprocessing

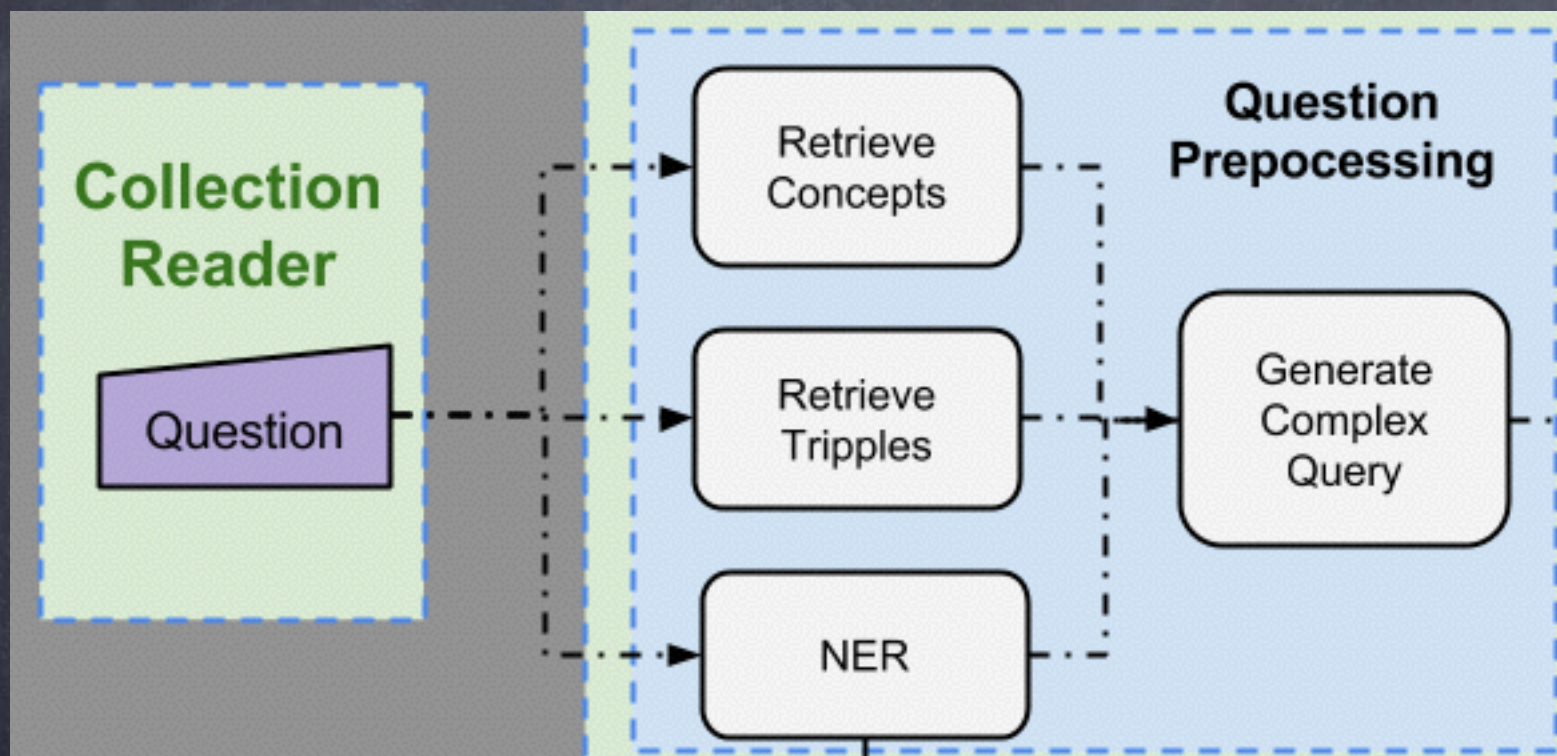
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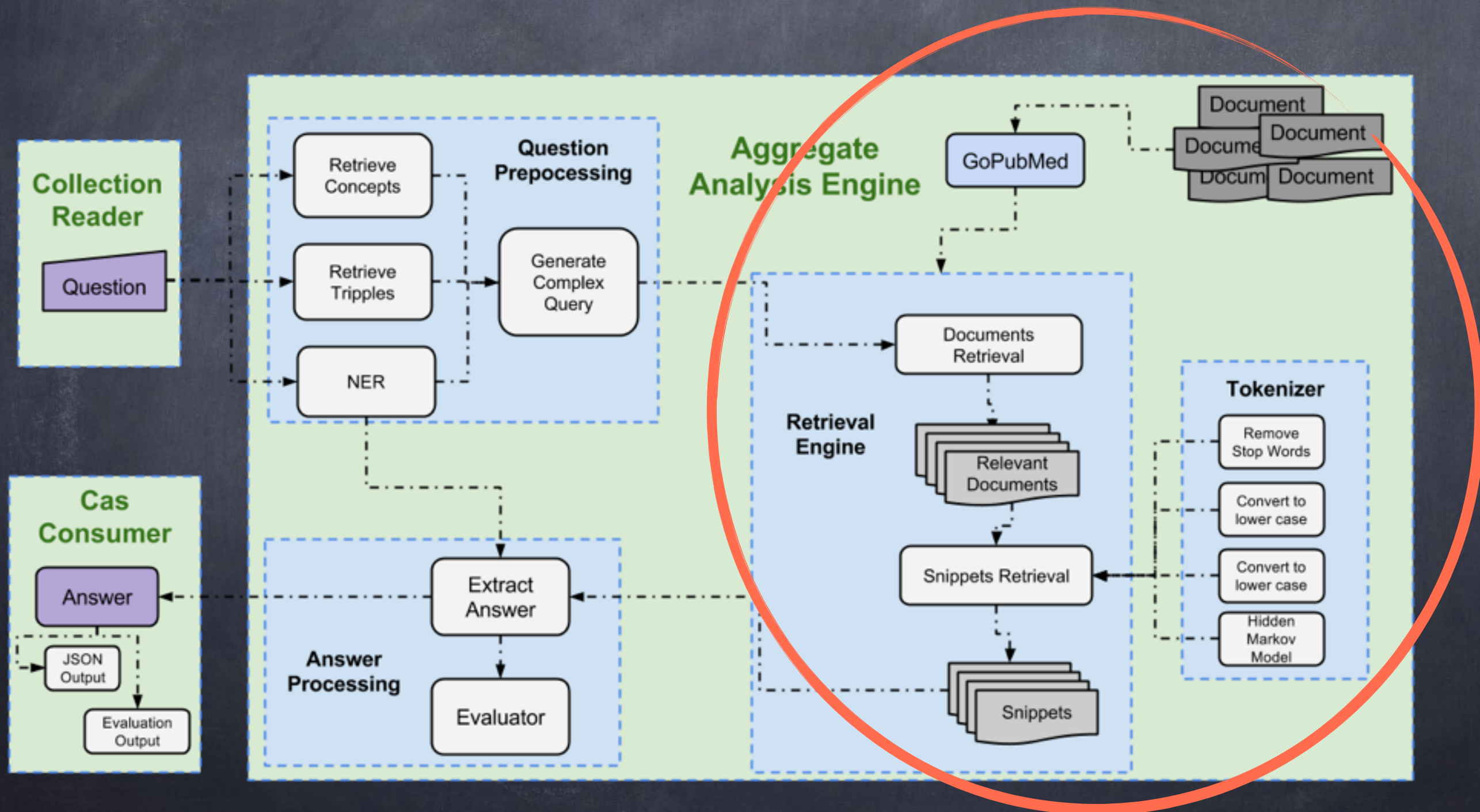
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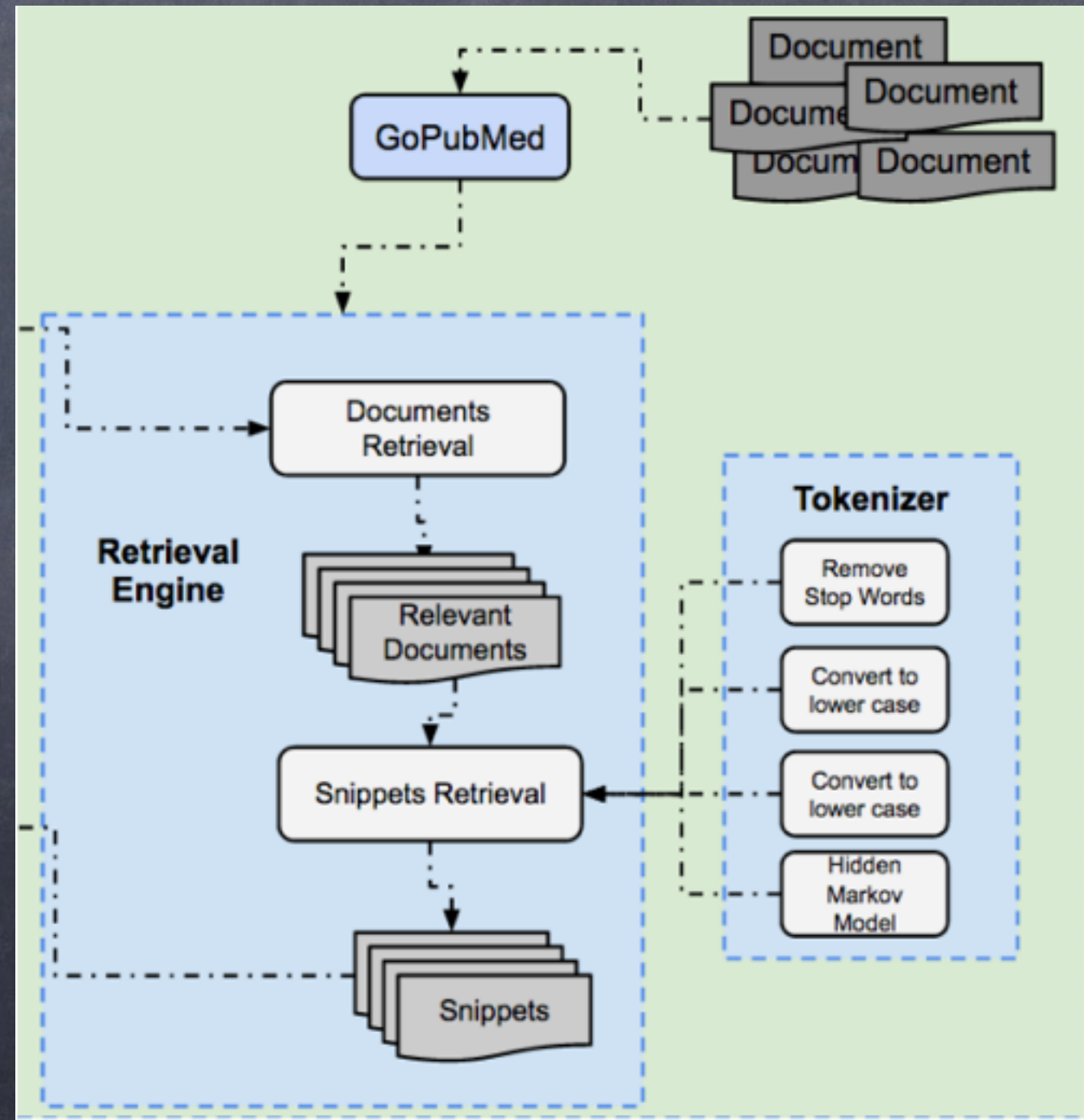


Building a **prototype** for Biomedical Question Answering System (BioASQ)



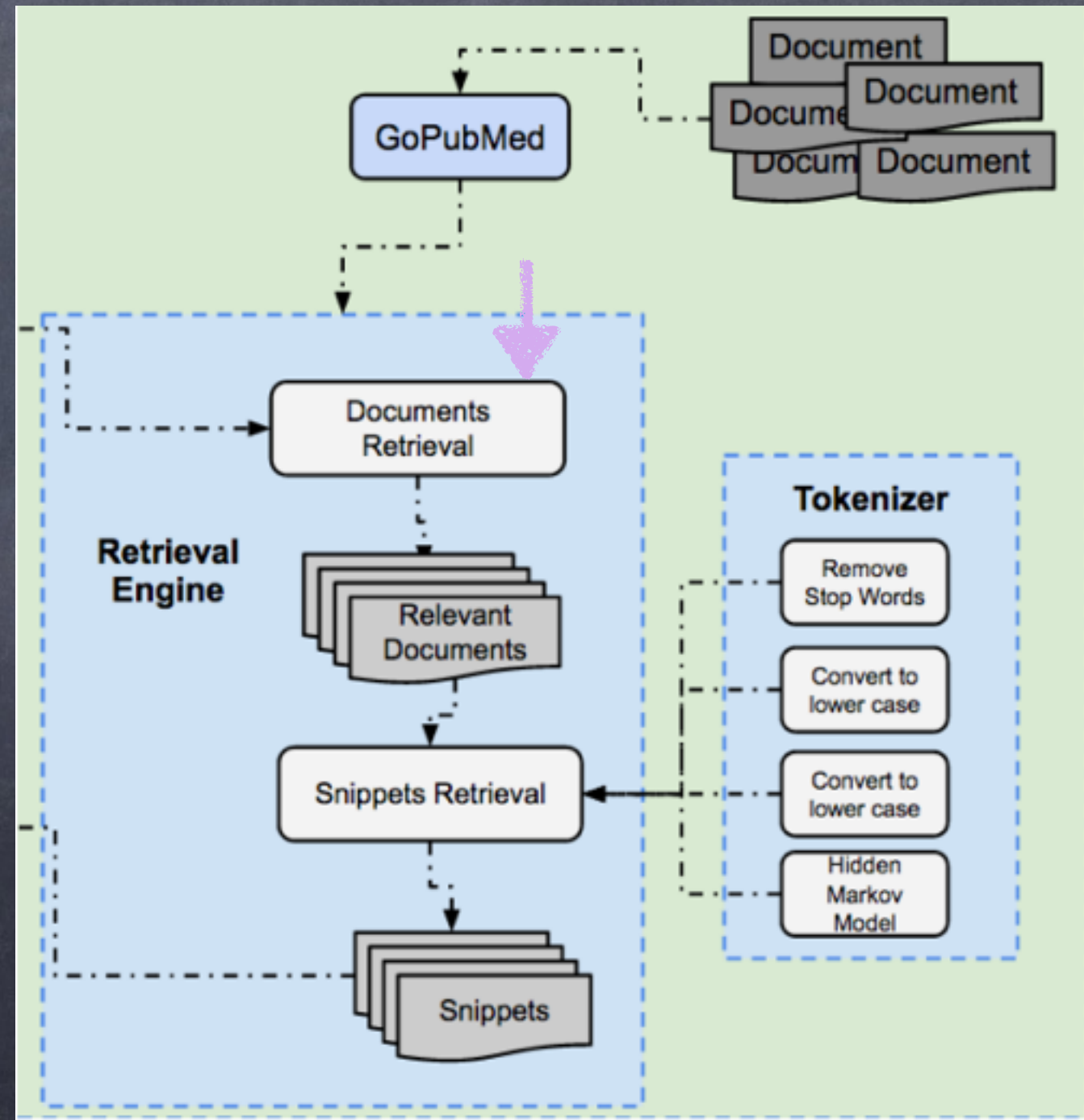
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2. Retrieval Engine



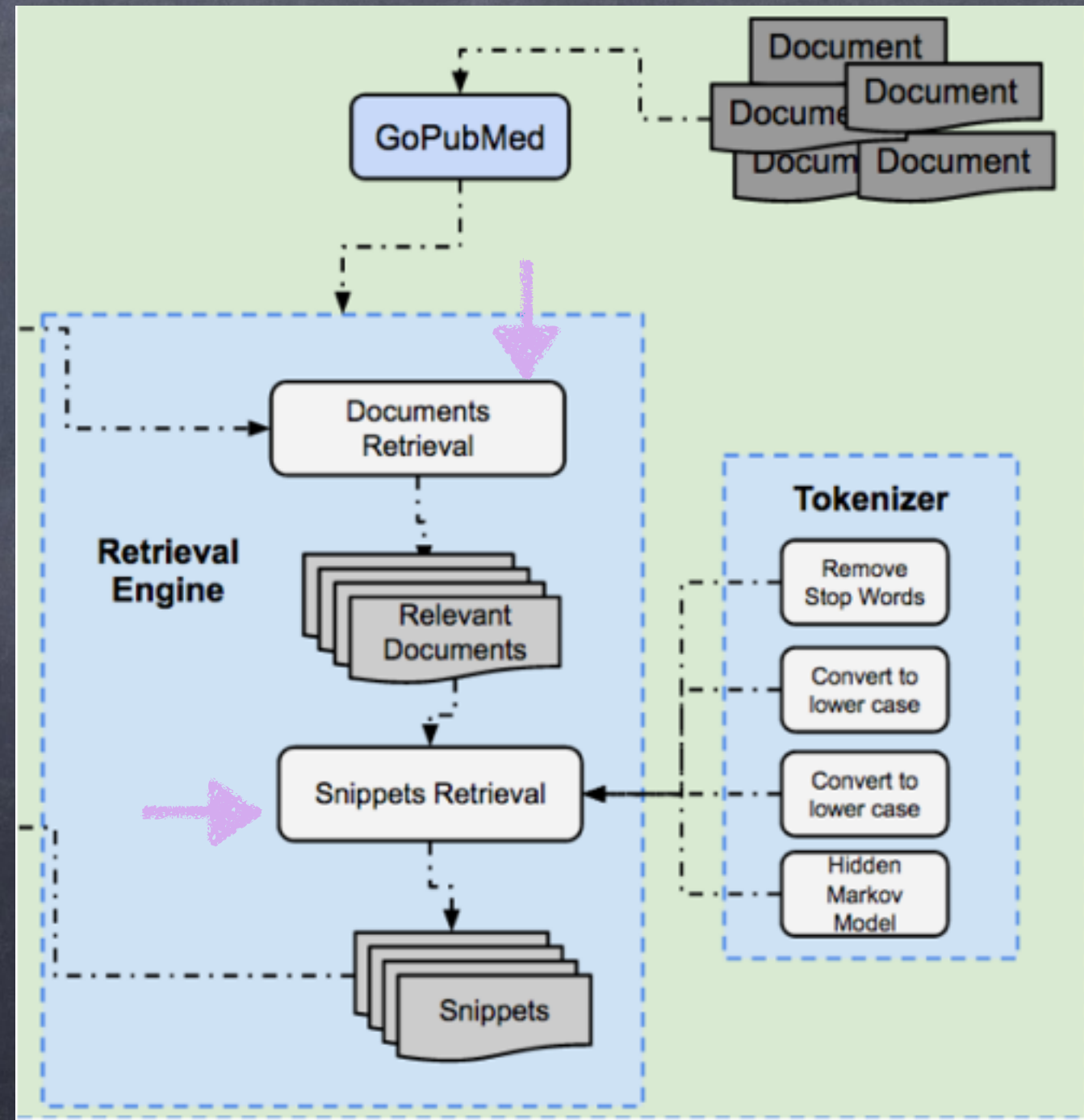
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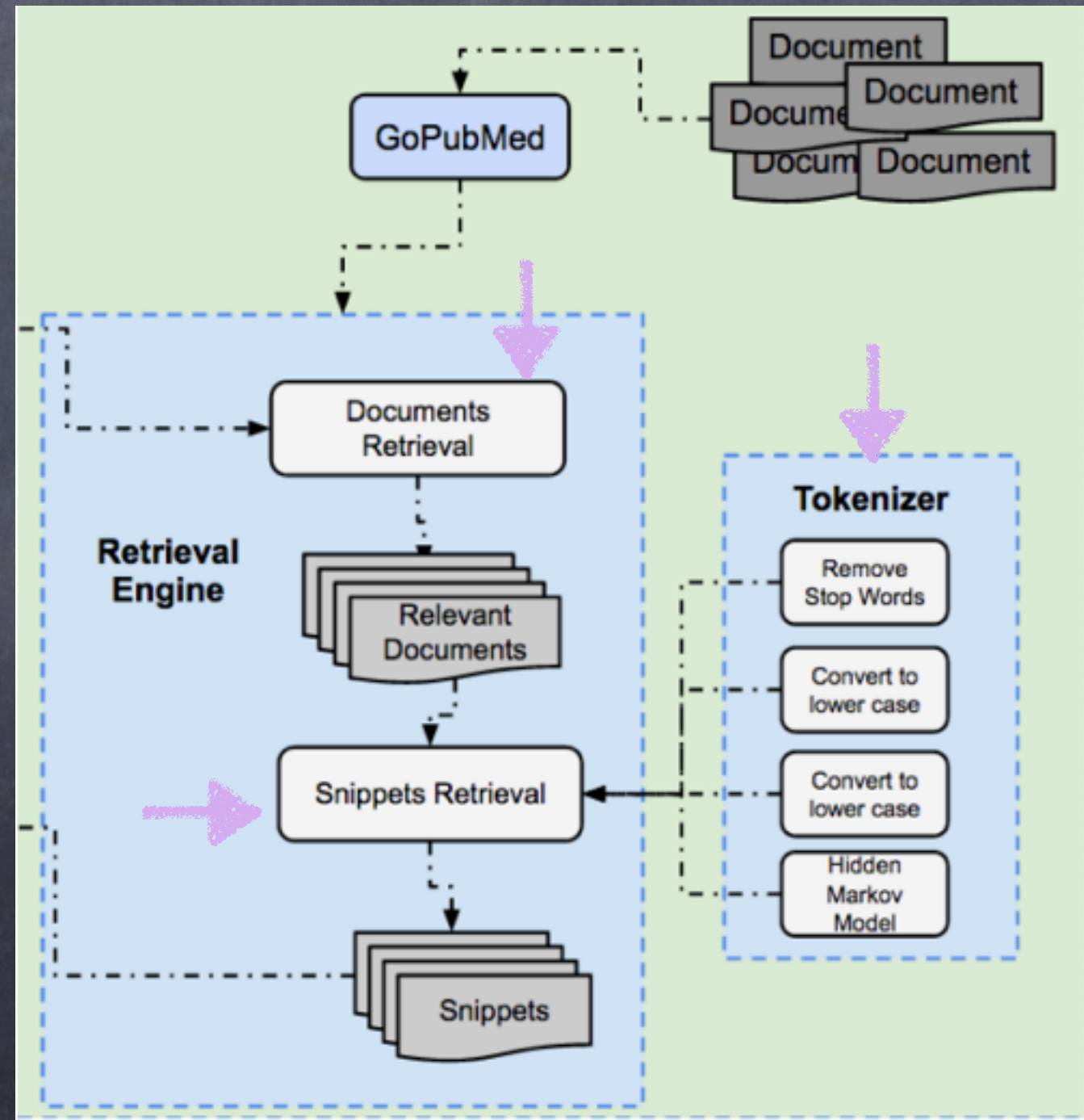
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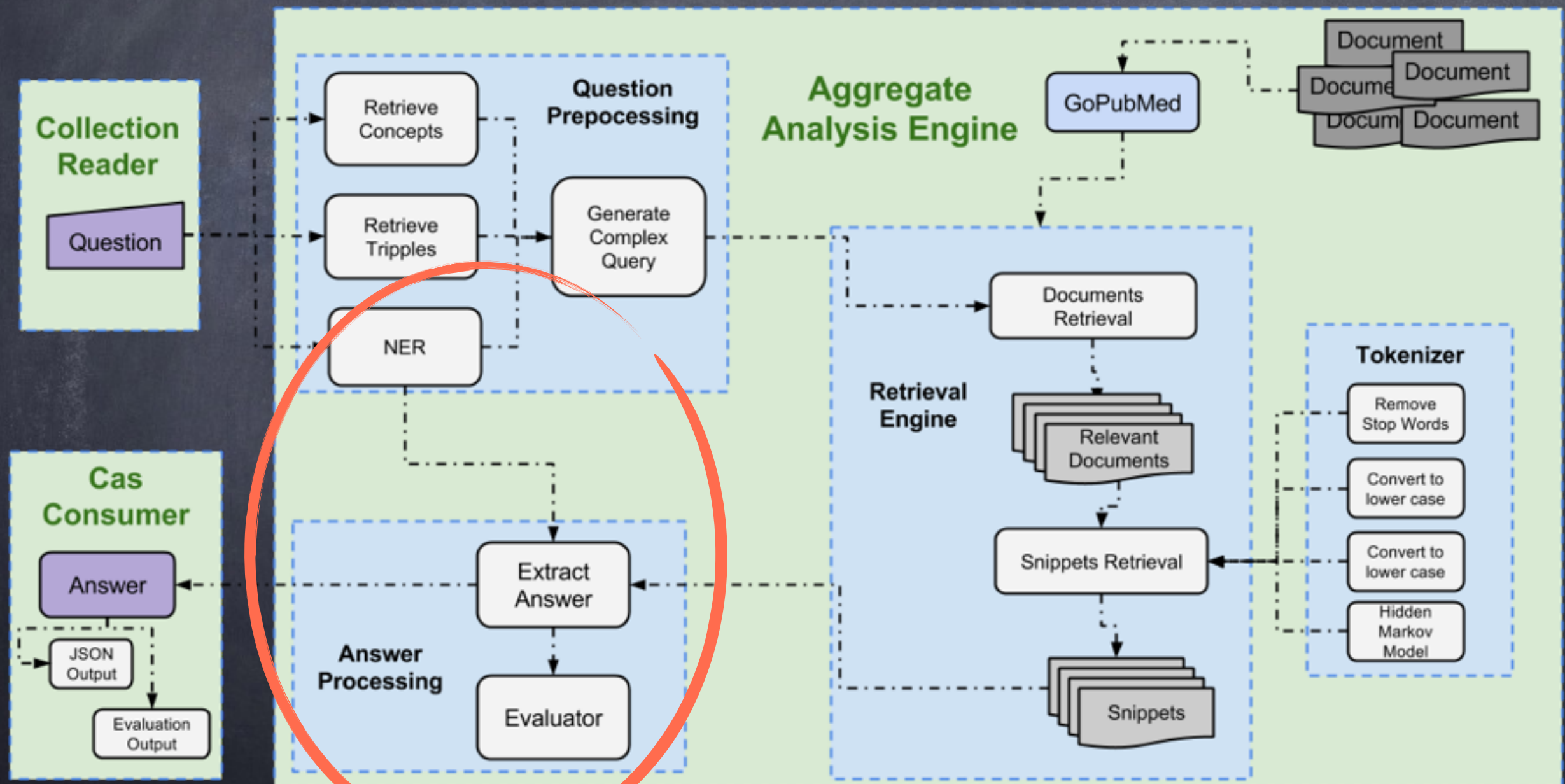


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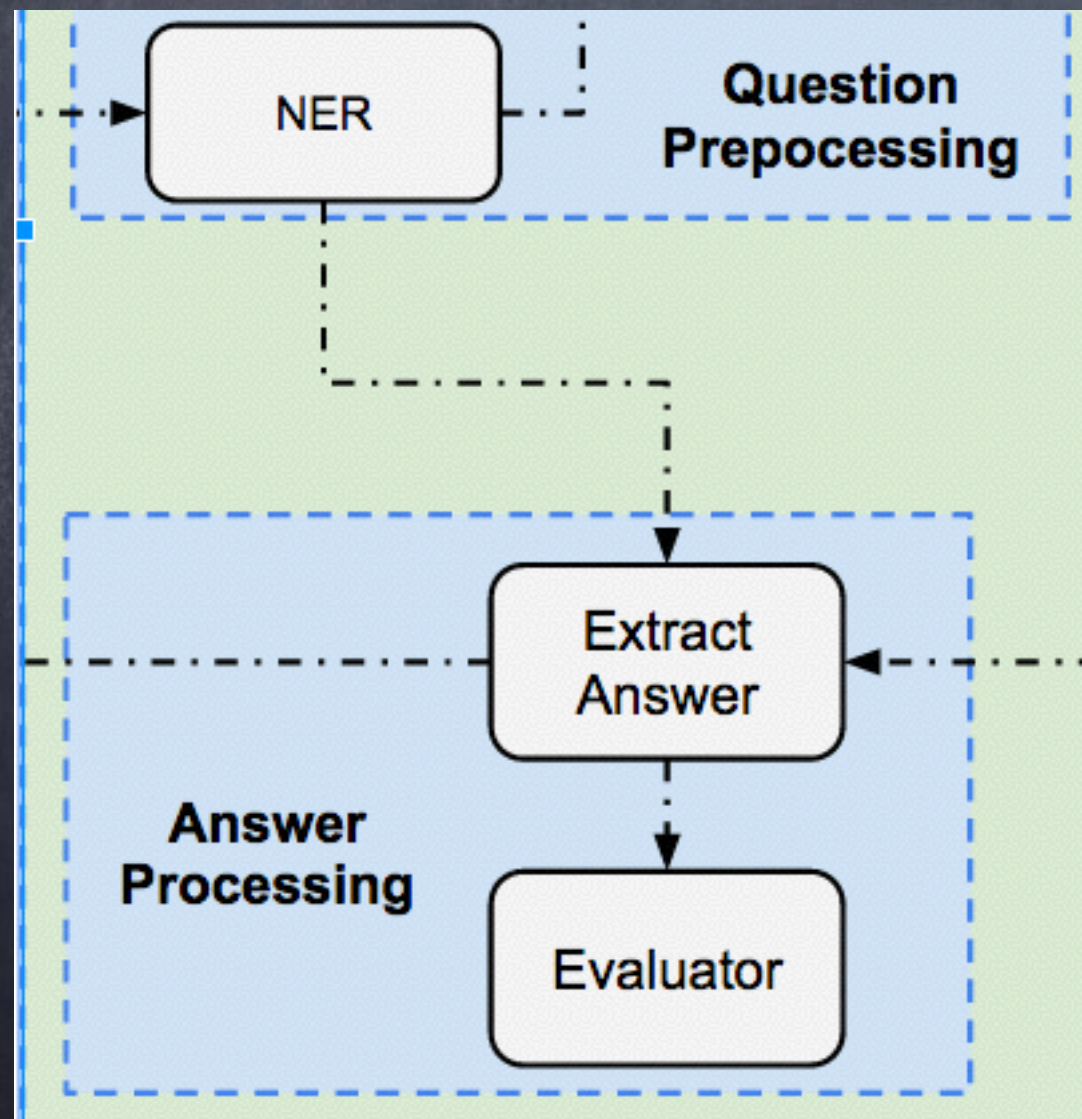
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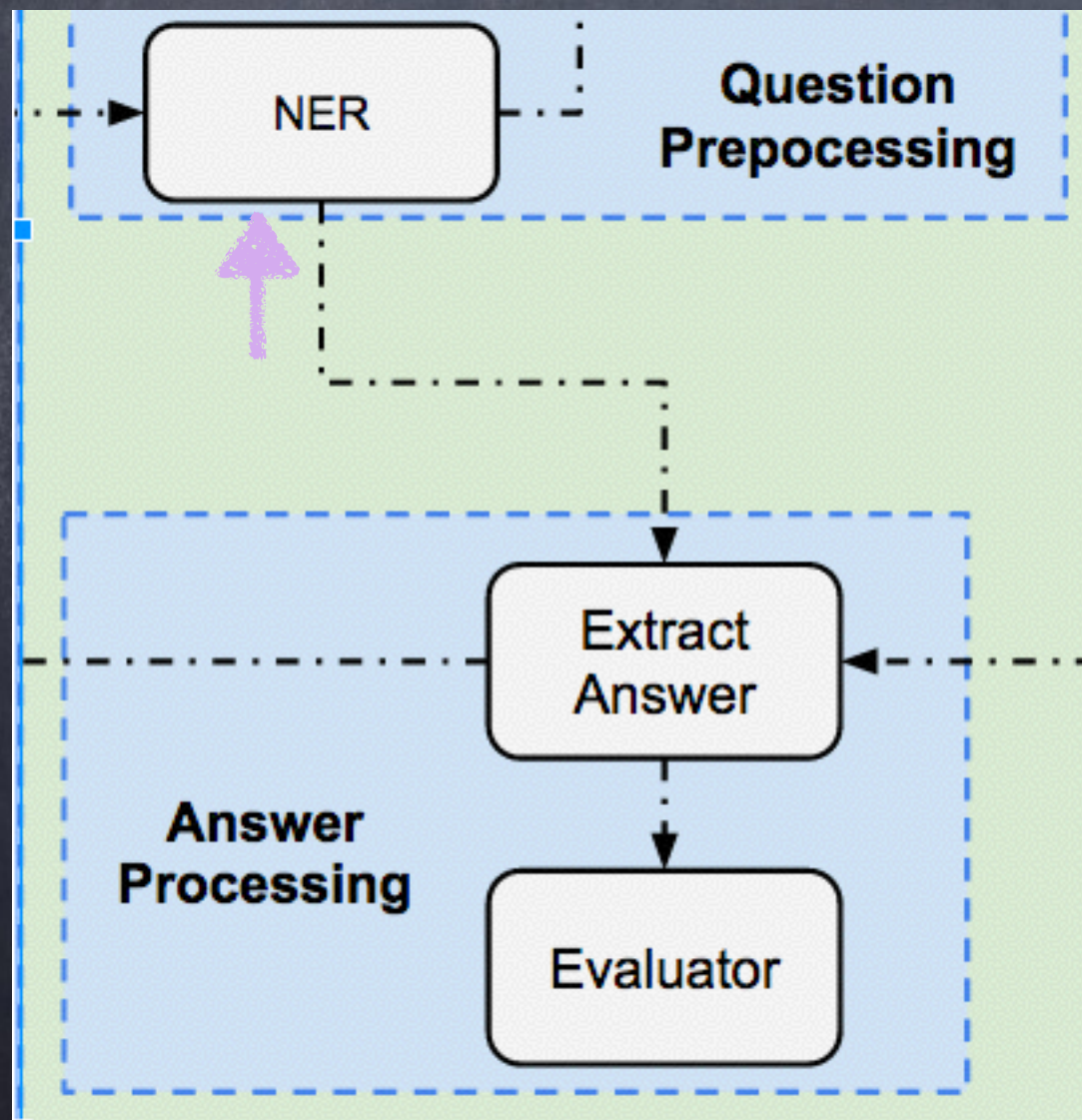


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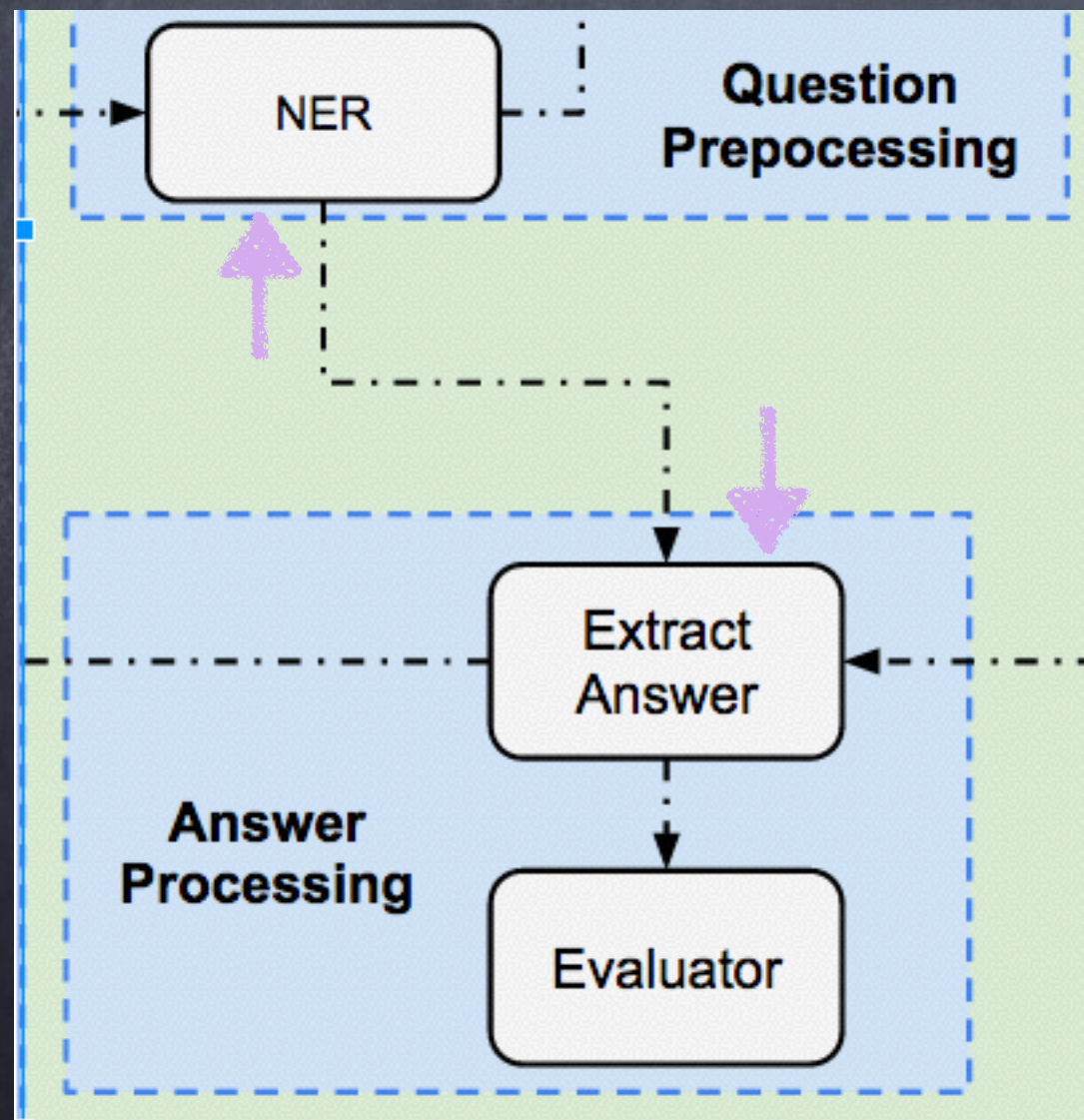
3. Answer Processing

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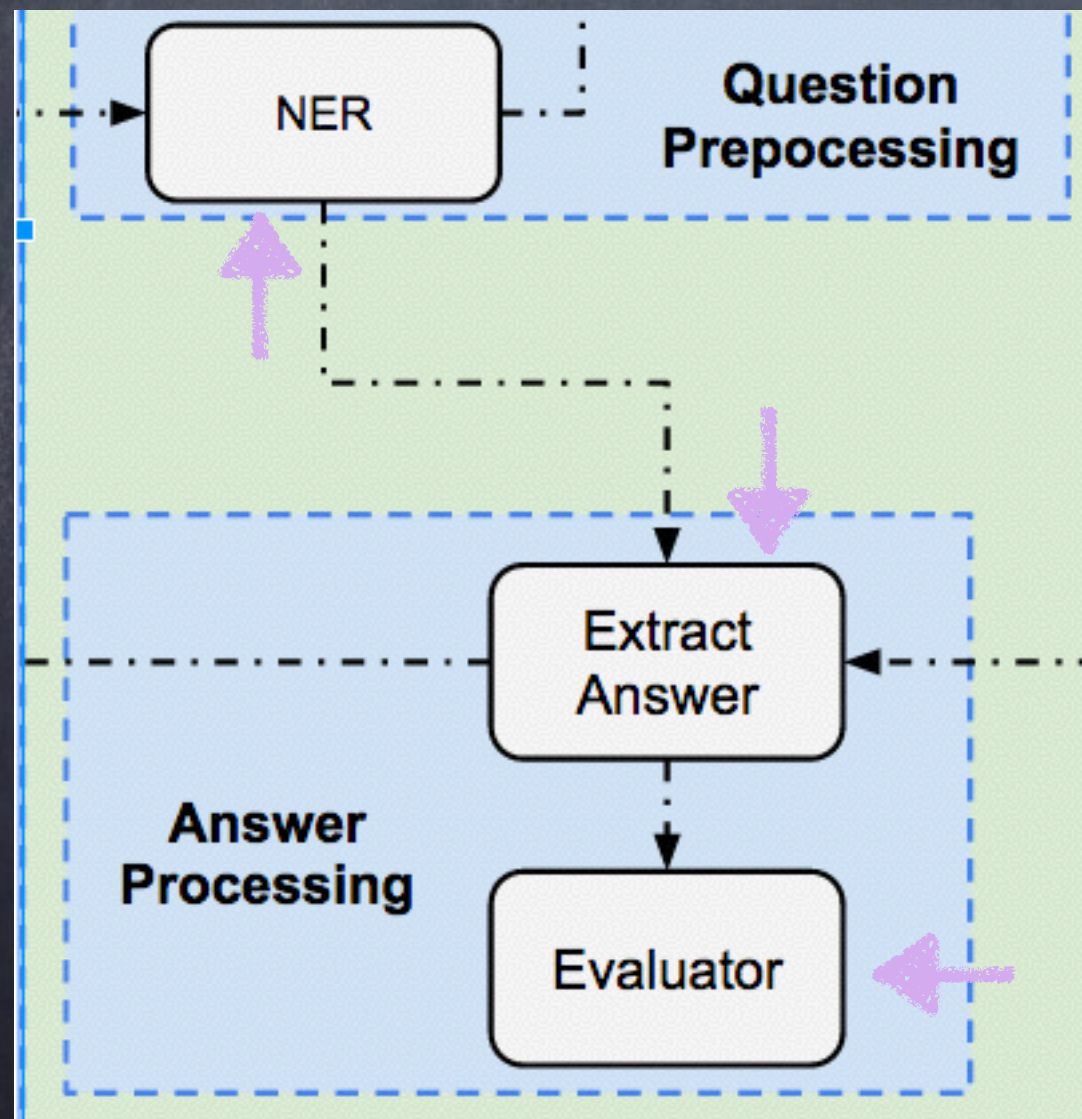
3. Answer Processing

- Building a **prototype** for Biomedical Question Answering System (BioASQ)



3. Answer Processing

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3. Answer Processing

Result

Future Work

Future Work

- document retrieval rate
- snippet extraction rate
- machine learning