

# SPRINT 2 PRESENTATION

*Team 2*

*Lei XIAO*

*Yan HE*

*Yifu WANG*

*Xi LIU*

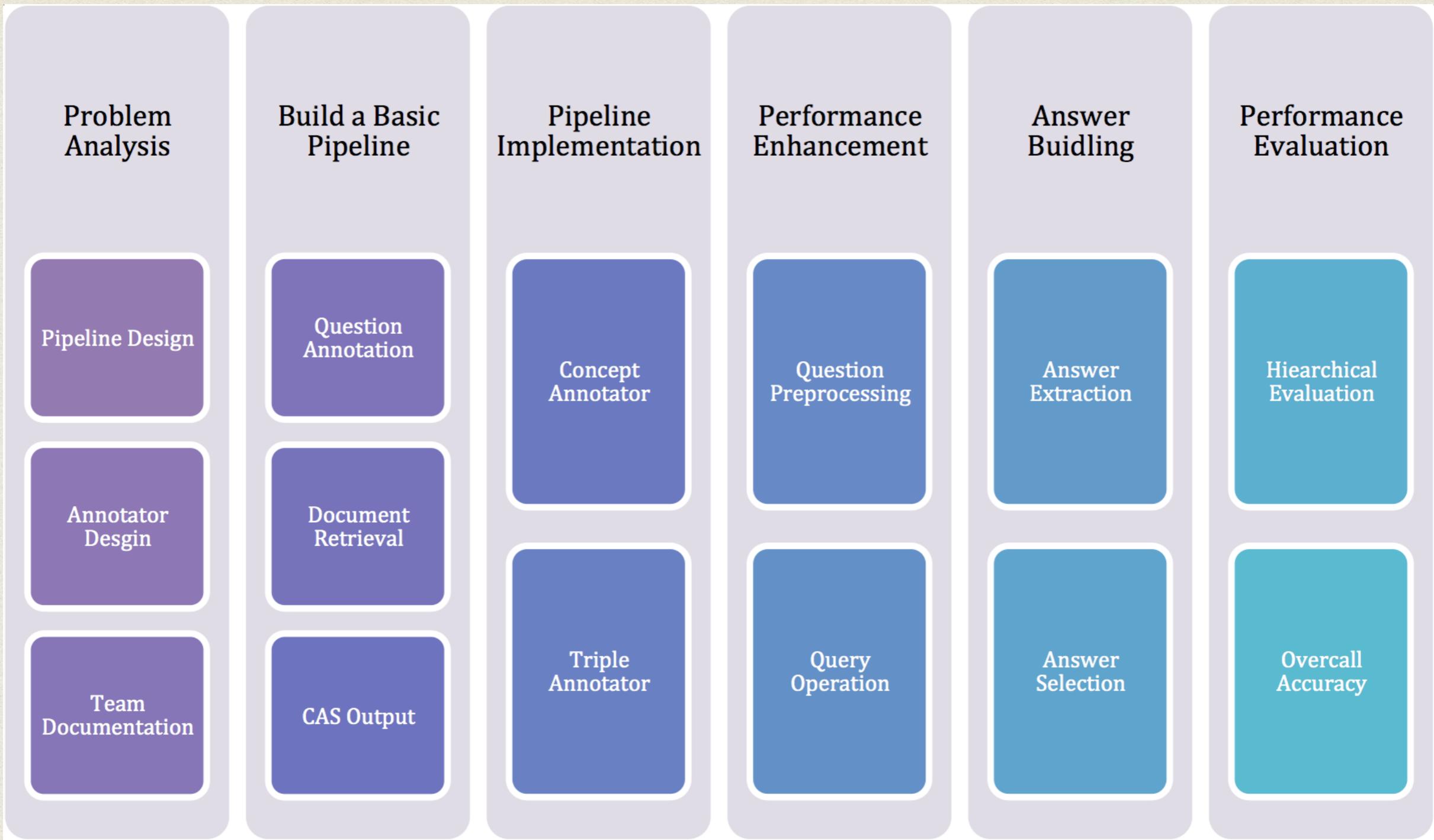
*Xiaoxu LV*

*Vision*

Solve Yes/No question with high precision



# *Timeline*



# *Timeline*

Sprint 1

- Implemented the pipeline
- built annotators for question, document, concept, and triple
- had problems with github and uima environment settings

Sprint 2

- More frequent Communication and Collaboration - Resolved the github problem
- Built the annotators for snippet, query preprocessing, and hierarchical evaluation.
- Propose strategies for answer extraction and answer selection, as well as overall evaluation.

Sprint 3

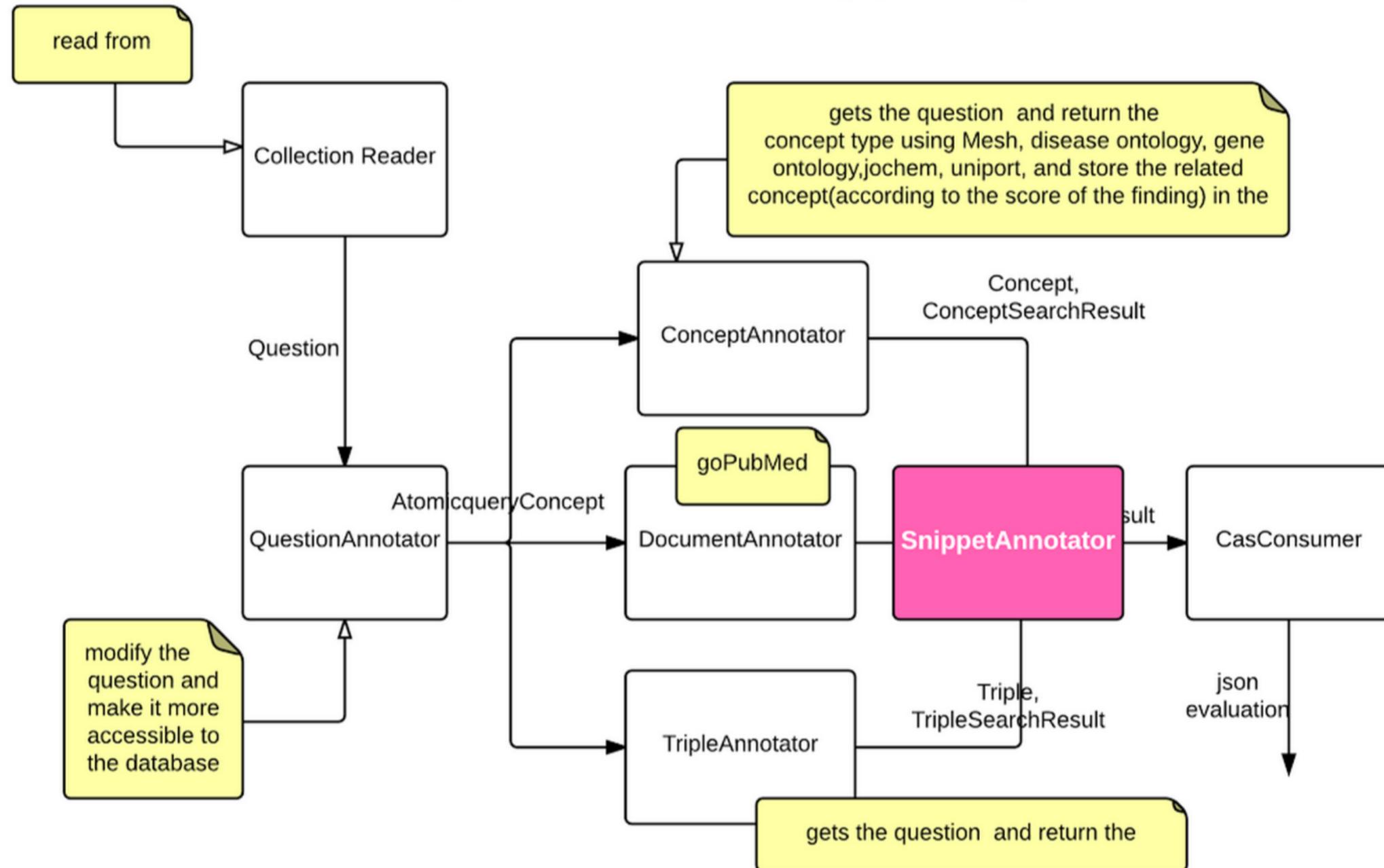
- Extract and Select Answers
- Improve Overall Performance

## *Main task*

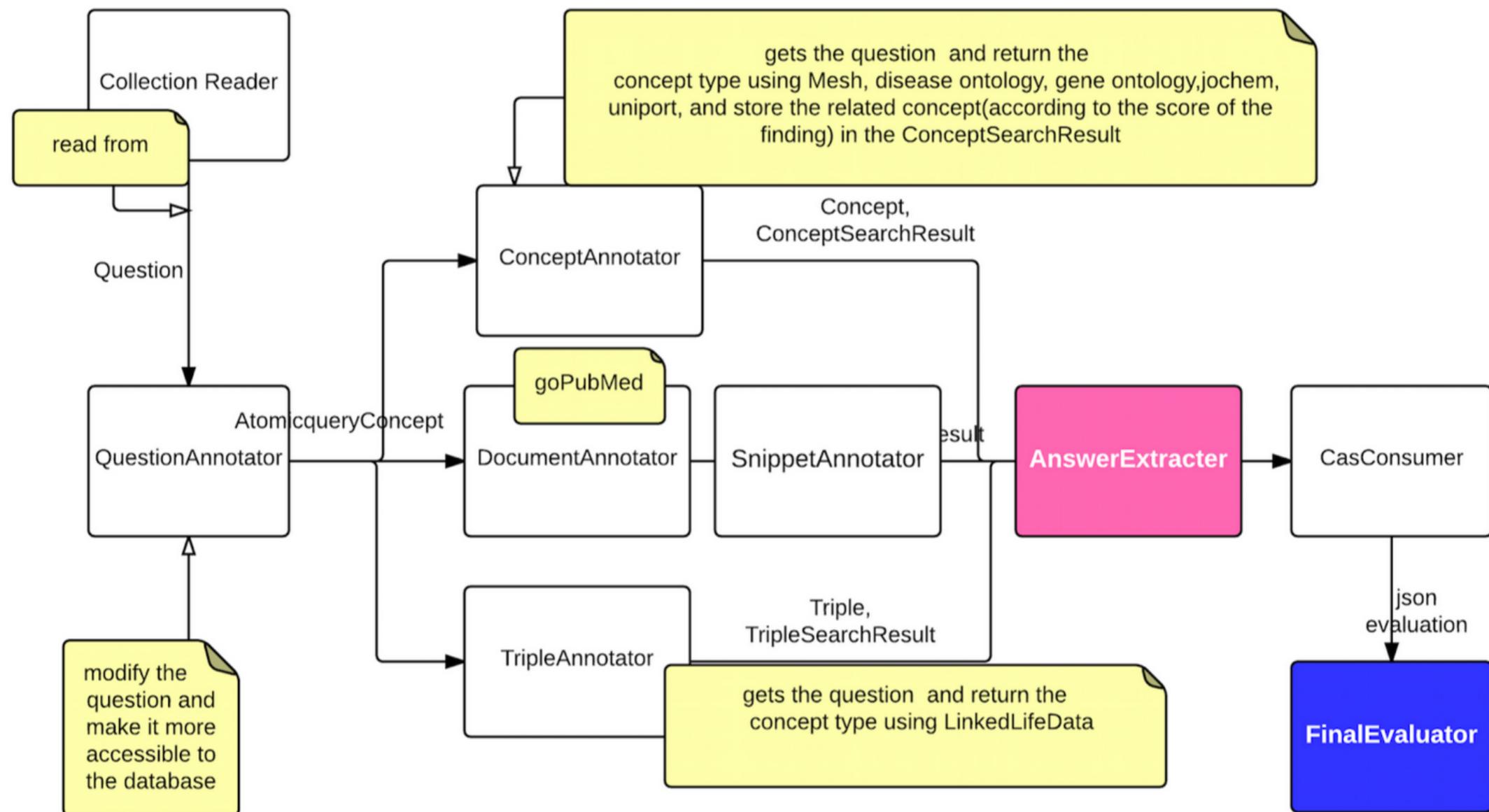
### *Answer Extraction for Yes/No questions*

- A model to score the relevance of the answers and the questions
- A feature function combining the relevance and opinion scores to classify each answer to be “Yes”, “No”
- We propose three features, including the relevance feature, the sentiment-word score feature and the position weight feature, for classifying the answers to general questions. We then integrate these three features to obtain a novel feature function that classifies the answers into three categories: “Yes”, “No”
- The relevance score and the position score give a “confidence score” to the sentence, while the other features give a score to tell whether this sentence is a supporting opinion to the question or not

# Previous pipeline



# Current Pipeline

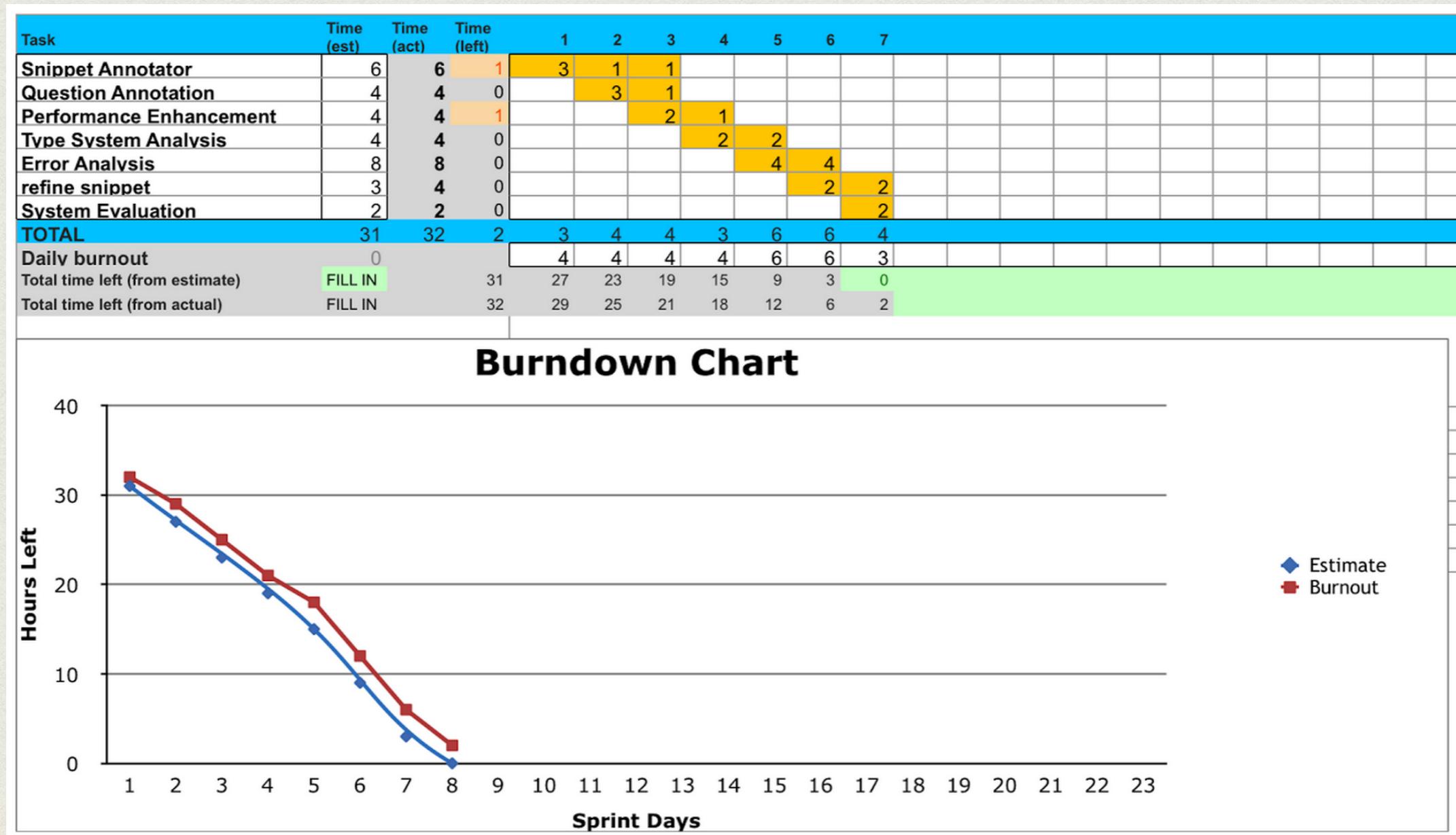


# *Prior Sprint Backlog*

50	Snippet Evaluation	Evaluate the annotator in the following aspects: response time, precision, recall, MAP, GMAP.	Print and evaluate retrieval result	80
50	Answer Evaluation	Evaluate the annotator in the following aspects: response time, precision, recall, MAP, GMAP.	Print and evaluate retrieval result	80
30	Error Analysis	Analysis on why some methods can not give us wanted result by looking at the answer structure	Print and evaluate answer information Manual Comparison and experiments	99
30	Hierarchical Analysis	We will evaluate the annotations for: every stage, intermediate retrieval results, final result, and overall performance, trade-offs	Print and evaluate answer information	70
30	Performance enhancement	Enhance the system performance by utilizing NLP API, building better queries, and experimenting answer selecting strategies	Print and evaluate answer information	70
20	System evaluation	Evaluate the system in the following aspects: response time, precision, recall, MAP, GMAP. We will evaluate the annotations for: every stage, intermediate retrieval results, final result, and overall performance, trade-offs	Print evaluation information	70

# Prior Sprint Burndown Chart

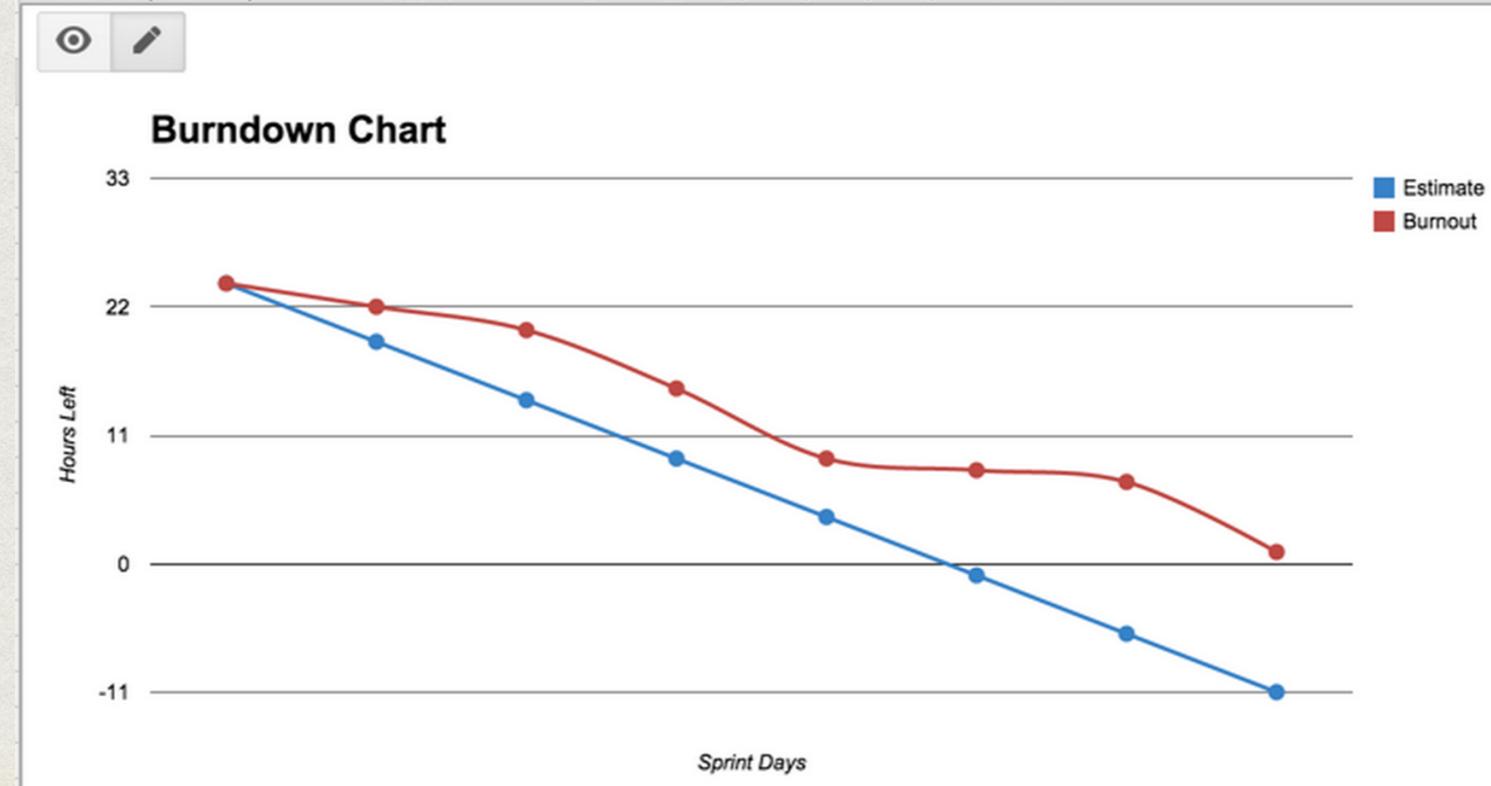
- Lei



# Prior Sprint Burndown Chart

- $X_i$

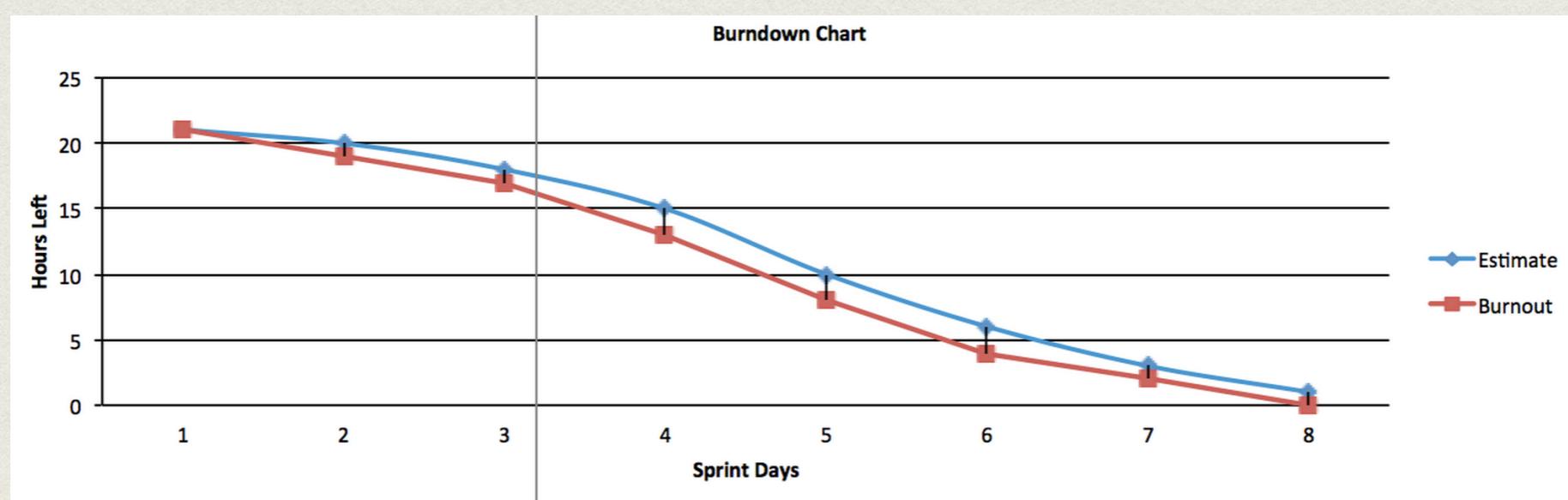
Task	Time (est)	Time (act)	Time (left)	1	2	3	4	5	6	7
Pipeline Revision	3	3	1	2						
Question Post-processing	2	2	0		2					
Complex Question Operation	8	8	0			4	4			
Answer Extraction	8	8	0				2			6
Documentation	2	2	0			1			1	
Feedback	1	1	0					1		
Presentation Preparation	4								5	
<b>TOTAL</b>	<b>24</b>	<b>24</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>6</b>
Daily burnout	-11				5	5	5	5	5	5
Total time left (from estimate)	FILL IN			24	19	14	9	4	-1	-6
Total time left (from actual)	FILL IN			24	22	20	15	9	8	7



# Prior Sprint Burndown Chart

- Xiaoxu

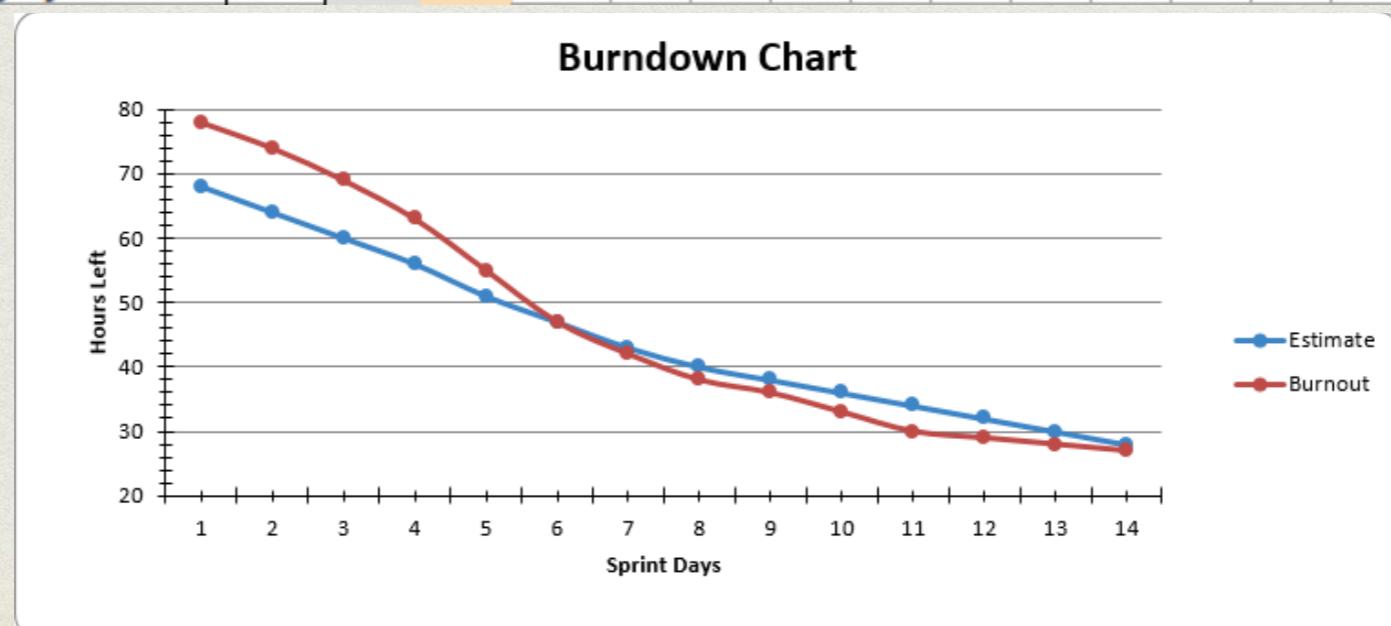
Task	Time (est)	Time (act)	Time (left)	1	2	3	4	5	6	7
Type System Analysis	3	3	0	2	1					
QuestionAnnotator Design	2	2	0		1	1				
Snippet Analysis	6	6	0			3	3			
Query Performance analysis and enhancement	4	4	0				2	2		
Pipeline refine documentation	3	3	0					2	1	
<b>TOTAL</b>	<b>21</b>	<b>21</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>
<b>Daily burnout</b>	<b>0</b>			<b>2</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>2</b>
Total time left (from estimate)	FILL IN		21	20	18	15	10	6	3	1
Total time left (from actual)	FILL IN		21	19	17	13	8	4	2	0



# Prior Sprint Burndown Chart

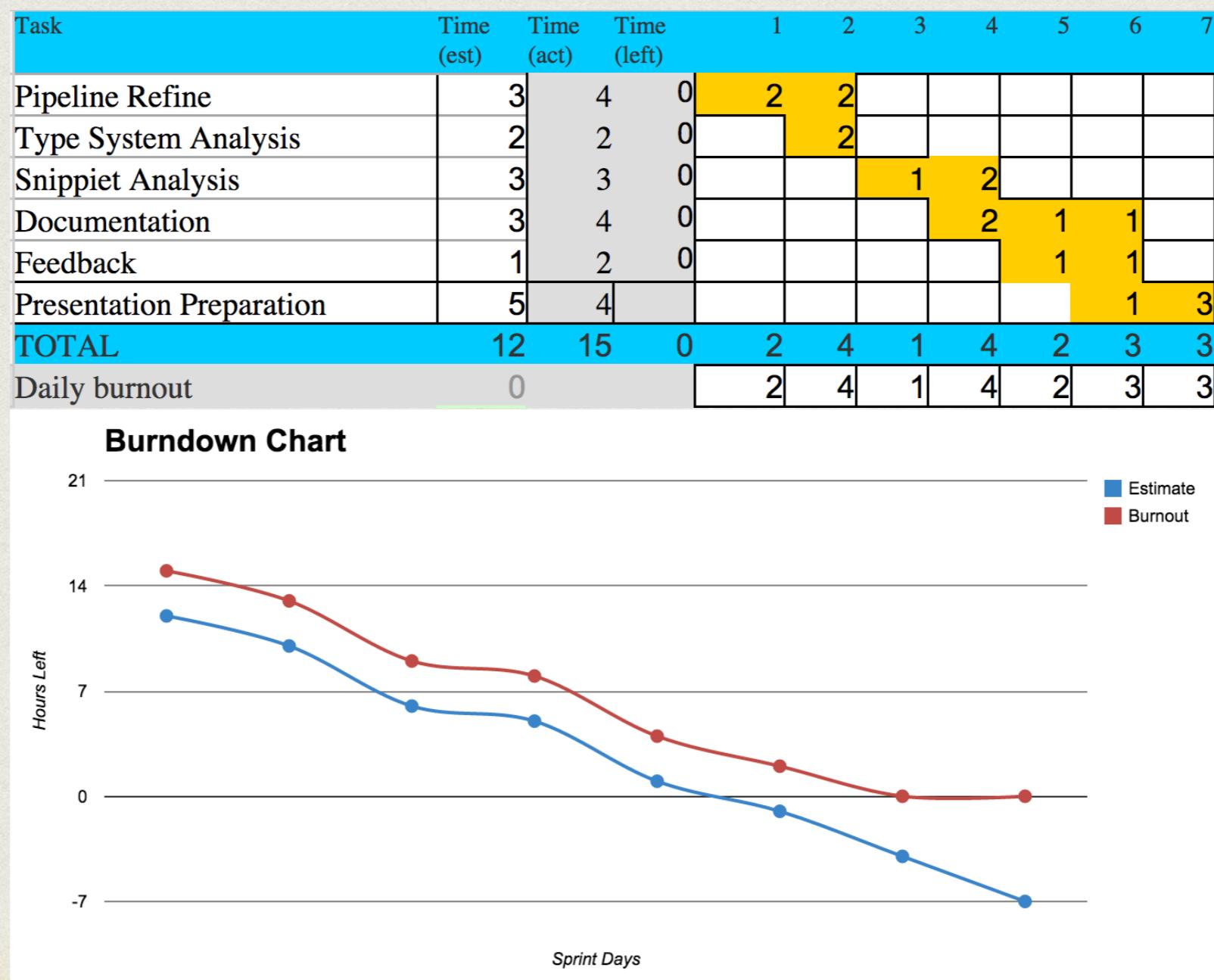
- Yifu

Task	Time (est)	Time (act)	Time (left)	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	3	5	0	2	2	1											
Planning	3	5	0	2	2	1											
Team documentation	3	4	0	2	1	1											
Pipeline Design	5	5	1		2	2											
Type System Analysis	1	5	0		2	2	1										
Annotator Design	4	4	0				3	1									
Build Pipeline	5	9	0			3	6	2	1								
Build Evaluator for Q	2	4	0					3	1								
Build Evaluator for D	2	2	1							1							
Build Evaluator for C	2	2	1							1							
Build Evaluator for Triple	2	3	0						2	1							
Update Annotator	4								2	1							
Build Evaluator for S	4	4	0							2	1	1					
Print by Category	3	3	1								1	1					



# Prior Sprint Burndown Chart

- Yan



# *Retrospective*

## *For whole team*

Team Member	Set the Stage (how did you feel this sprint)	What Happened this sprint	Why did those things happen	What To Do to keep up what worked well and prevent what didn't
Xi Liu	Great Teamwork and Collaboration	In sprint 1, we implemented the pipeline and built annotators for question, document, concept, and triple. and snippet. We had problems with github and uima environment settings.	Careful planning, thorough research, and detailed documentations. Not familiar with the tools.	Keep maintaining the documentations and logs. Solve the environmental problem by interacting with command lines and revising source codes.
Yifu Wang	Working on my part of project	Learn team collaboration on github, update evaluator for snippets, separate evaluate results, and update CASconsumer for result analysis.	This time we understand the requirement more clearly, and understand the relationship of the type system more detailed and precisely,	Keep unit testing on every function, Commit project frequently and merge wisely. Make every committed version runnable. Keep rework on previous code.
Lei Xiao	Follow the milestone closely	I wrote the SnippetAnnotator, which could get the most related passage from the documents. And we modified the question text to improve the performance of the system, such as deleting the stopwords, and the punctuation.		Keep analysing the codes and type system, and learn to using the github more precisely.
Yan He	keep on the right track, but didn't finish the task within the expected time.	In the last sprint we tried to figure out some new ideas to improve the performance of the result in order to avoid us spend more time to solve the problem in the final sprint. Therefore in this sprint, we have implemented the ideas and methods in our pipeline. But I didn't finish my work as my estimation.	The reason that I didn't finish my task in the estimate time is that I have to prepare for the final presentation of another important project. However, once I finished my work on that project, I put my effort on this project again.	We need to communicate with each other about our schedule and work load for the next week. By this way we could assign the task to every team member more reasonable and finish our own work in time.
Xiaoxu Lu	Progress everyday and gain more understanding about what we are going to do and still feel anxious whether we could make it for the more we learn, the more we realize that we still don't know	Work on pipeline design refinement, employ more type from given type system to previous work, help develop question annotator. Got a lot of rejected for github, yet not familiar with branch issues, still needs a lot of practice and deep understanding.	Collaborative coding in a project is so important and we kind of wasted a lot of time on dealing with github issues.	Keep employing more useful type in the given type system to fulfill the bioQA requirement.

## *Task for next sprint*

- ComplexConceptQuery implementation
- Answer Extraction for yes/no questions
- Answer Evaluation
- CasConsumer result integration
- Error Analysis and System performance enhancement
- Javadoc Generation
- Team Documentation

# Last sprint Story Wall

Backlog	Sprint	In Development	Ready for Testing	Done
<p>Answer Extraction</p> <p>Answer Evaluation</p> <p>Hierarchical Analysis</p> <p>Team Documentation</p> <p>Documentation</p> <p>Feedback</p> <p>System Evaluation</p>		<p>Snippet Retrieve</p>	<p>Error Analysis</p> <p>Type System Analysis</p> <p>Performance Enhancement</p>	<p>Planing</p> <p>Pipeline Design</p> <p>Concept Annotation</p> <p>Annotator Design</p> <p>Question Annotation</p> <p>Triple Annotation</p> <p>Build Pipeline</p> <p>Document Annotation</p> <p>Result Evaluation</p>

# *Current sprint Story Wall*

Backlog	Sprint	In Development	Ready for Testing	Done
	<p>System Evaluation</p> <p>Hierarchical Analysis</p> <p>Team Documentation</p> <p>Documentation</p> <p>Feedback</p>	<p>Answer Extraction</p> <p>Answer Evaluation</p>	<p>Error Analysis</p> <p>Type System Analysis</p> <p>Performance Enhancement</p> <p>Snippet Retrieve</p>	<p>Planing</p> <p>Pipeline Design</p> <p>Concept Annotation</p> <p>Annotator Design</p> <p>Question Annotation</p> <p>Triple Annotation</p> <p>Build Pipeline</p> <p>Document Annotation</p> <p>Result Evaluation</p>

*Questions?*

