AMOS 2023ws05 - Planning Document Project Data

Project Name	
Online team meeting	https://fau.zoom.us/j/68283073150
Production system (if any)	
Test system (if any)	
GitHub repository	https://github.com/amosproj/amos2023ws05-pipeline-config-chat-ai
GitHub feature board	https://github.com/orgs/amosproj/projects/29/views/2
GitHub impediments backlog	https://github.com/orgs/amosproj/projects/35
Team T-shirt (black)	https://www.shirtinator.de/loadBasket/rhFtkf_qdlL
Additional materials	
Team email list	oss-amos-proj5@lists.fau.de
Team logo	https://www.shirtinator.de/loadBasket/rhFtkf_qdlL
Happiness index	https://happy-amos.appspot.com/Project?project=6222853397544960&course=6210557241720832

AMOS 2023ws05 - Planning Document Project Team

Last Name	First Name	GitHub User Name	Email Address
Katziuk	Avi	avikatziuk	avi.katziuk@fau.de
Betancourt Barrita	Cecilia	ceciliabetb	cecilia.betancourt@fau.de
El Brak	Sara	SaraElBrak	sara.el@fau.de
Hazzouri	Zain Alabden	bergzain	zain.hazzouri@gmail.com
Najar	Linda	lyndanajjar	linda.najar@fau.de
Smadi	Obeidah	obismadi99	obeidah0smadi@gmail.com
Gtari	Nahrain	Nahrain1	nahraingtari1@gmail.com

AMOS 2023ws05 - Planning Document Role Assignments

#	Meeting Day	Product Owner	Software Developer	Release Manager	Scrum Master	Comment
		Cecilia Betancourt Barrita, Avi				
1	2023-11-01		Everyone else	zain hazzouri	Sara El Brak	
2	2023-11-08	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Obi Smadi	Sara El Brak	
3	2023-11-15	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Nahrain Gtari	Sara El Brak	
4	2023-11-22	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Linda Najar	Sara El Brak	
5	2023-11-29	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	zain hazzouri	Sara El Brak	
6	2023-12-06	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Obi Smadi	Sara El Brak	
7	2023-12-13	Cecilia Betancourt Barrita, Avi	Everyone else	Nahrain Gtari	Sara El Brak	Mid-term due
8	2023-12-20	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Linda Najar	Sara El Brak	
9	2023-12-27	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	zain hazzouri	Sara El Brak	
10	2023-01-11	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Obi Smadi	Sara El Brak	
11	2023-01-18	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Nahrain Gtari	Sara El Brak	
12	2023-01-25	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Linda Najar	Sara El Brak	
13	2023-02-01	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	zain hazzouri	Sara El Brak	
14	2023-02-08	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Obi Smadi	Sara El Brak	Demo day!
15	2023-02-15	Cecilia Betancourt Barrita, Avi Katziuk	Everyone else	Nahrain Gtari	Sara El Brak	Retrospective

AMOS 2023ws05 - Planning Document

Team Contract

Goals	Create a ChatBot per the company's requirements in a successful way
	Maintain an agile manner of work in a good atmosphere
Meeting norms	The cameras should be turned on for better human communication
	Meetings must not exceed 30 min over time, otherwise schedule another meeting.
	Delays should be informed and handled on agile way (write in the telegram group)
	weekly meeting
Working norms	Contributing and communicating openly
Working norms	Keep respect during possible conflicts (on technical issues z.B)
Coordination norms	Everyone sticks to assigned roles
Coordination norms	Everyone sticks to assigned roles
Communication norms	communicate in advance and don't leave it for the last minute (don't be ashamed of asking simple questions)
Consideration norms	We communicate conflicts openly
	Team final decisions are based on voting
Cont. improvement norms	Improvement suggestions are welcomed
	Happiness index and standup emails to be reviewed in case of non-satisfaction
Rewards	Obi makes the team a cake - final reward
	Have coffee and bring games after the mid release
Sanctions	Team will decide on the memeber's sanction accordingly
Signatures	
Scrum Master	Sara El Brak
Product owner	Cecilia Betancourt Barrita
Product owner	Avi Katziuk
Software developer	zain hazzouri (TU Berlin)
Software developer	Obi Smadi (TU Berlin)
Software developer	Nahrain Gtari
Software developer	Linda Najar

AMOS 2023ws05 - Planning Document Product Goal

Product Vision	Project Mission
UPDATED 03.12.23 Introducing ChatRTDIP. By leveraging the power of large language models and generative AI, this product aims to offer an intuitive, user-friendly interface for establishing RTDIP configurations. The focus is on simplicity and efficiency, allowing users from various backgrounds, technical or otherwise, to interact with and create complex data extraction configurations with ease. The integration of the RTDIP and RTDIP SDK as a knowledge base, combined with a chat engine, will result in an accessible and adaptable product, ultimately reducing the learning curve, time, and effort required in analyzing real-time sensor data.	UPDATED 03.12.23 The mission of the ChatRTDIP project, in collaboration with Shell and under the AMOS framework, is to develop a cutting-edge tool that seamlessly blends chat AI technology with the robust data processing capabilities of RTDIP. The project is dedicated to creating a platform where users can effortlessly configure data pipelines using a conversational interface.

Sprint	Topic	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
Release	е						
Total				226	226	215	
Sprints							
1			nd Planning	5		5	226
2			e Architecture and Framework	33	221	27	221
3			ge Processing Integration	8	188	8	194
4			and Model Enhacement	10	180	10	186
5			nd Conversation Flow	13	170	13	176
6	Refine	Interactiv	re Communication	28	157	25	163
7			d simplify UI	34	129	34	138
8			testing and prepare for advanced queries input	20		19	104
9	Query, performance testing and improvements		8	75	8	85	
10	Farther speed improvments and UI adjustments		12	67	15	77	
11	Test of unsupported queries and edge cases			25	55	22	62
12	Quality	of life fea	atures	0	30	0	40
13	Prepare	for final	release	19	30	19	40
14	Final re	lease		11	11	10	21
					129		138
Feature	es						
1	Project	Kickoff	and Planning				
-			sh project infrastructure and team roles				
			Create bill of materials	3		3	
			Define regular meeting with IP	1		1	
			Build process review - Homework	1		1	
2	Chatbo	t Softwa	are Architecture and Framework				
_			the software architecture and prepare the necessary data for training the chatbot				
		,	Connect the bot to the RAG Hub	2		2	
			Pipeline workshop with IP	1		1	
			Initialize a ReadMe File	2		2	
			Collect the data for the RAG content Hub	2		2	

Sprint	Topic	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
_			Initialize a RAG content Hub	8		5	
			Define a third meeting with IP	1		1	
			Create a pre-alpha version of UI	8		5	
			Create the first output	3		3	
			Environment set up (pipleline)	3		3	
			Create a Software Architecture Document	3		3	
3	Natura	l Langua	ge Processing Integration				
		Develo	p the core NLP model for chatbot understanding				
			Create and configure inference end point for the model	5		5	
			Source processing power	3		3	
4	User In	teractio	n and Model Enhacement				
		Create	wireframes and UI mockups.				
			Create a docker image to run the inference endpoint	5		5	
			Test Plan for Prompt Engineering	2		2	
			Initialize a Domain-Specific Dataset (DNS)	3		3	
5	User In	terface	and Conversation Flow				
		Design	the chatbot's user interface and conversation flow.				
			Finding and Configuring an alternative UI	3		3	
			Inference Endpoint and Docker Container Creation	3		3	
			Text generation inference configuration	2		2	
			Create a new docker file	5		5	
6	Refine Interactive Communication						
		Detail o	on how to communicate with the bot				
			Prepare 7 testing queries for testing week 1	2		2	
			Add OpenAl API Key to the UI	3		3	
			Add response speed measurement to test how long does it take for the response	3		2	
			Implement Caching for Faster Responses	3		3	
			Create requirement.txt	2		2	
			Enable iterative communication with the bot	5		5	
			Set up a query catalog - single source of truth	5		3	
			Developing a Model-Agnostic Approach for Enhancing Speed Performance	5		5	
7	Begin testing and simplify UI						
			eliability, UX through testing, UI simplification for usability.				
			Q[1,a] - Query testing, optimization and verification	3		3	
			Clear the left UI bar	2		2	
			Add a title and Github link on the left of the UI	3		3	

Sprint	Topic	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
_			Streaming response model support	3		3	
			Prepare testing queries for testing week 2,3,4	2		2	
			Q[1,d] - Query testing, optimization and verification	3		3	
			Q[1,f] - Query testing, optimization and verification	3		3	
			Q[1,g] - Query testing, optimization and verification	3		3	
			Q[1,c] - Query testing, optimization and verification	3		3	
			Q[1,b] - Query testing, optimization and verification	3		3	
			Update ReadMe File	2		2	
			Cleaning up the repo	2		2	
			Q[1, a - g] Query testing, optimization and verification	2		2	
8	Contin	ue query	testing and prepare for advanced queries input				
			ce query testing, prepare for complex query inputs continuation.				
			Implement a script for queries construction	3		3	
			Script for Dockerizing & App Launching	3		3	
			Q[2, a - g] Query testing, optimization and verification	3		2	
			Experiment: Improve response times with a database	3		0	
			API error handling	2		3	
			Improve context awareness	3		5	
			Parsing for incrementally generated text	3		3	
9	Querv.	perform	ance testing and improvements				
		-	ce query performance through testing and optimizations.				
			Q[3, a - g] Query testing, optimization and verification	2		2	
			Initialize and test Q3 queries manually with PyTest	3		3	
			Script for updating the RAG content store in case changes are made to the RTDIP repo	3		3	
10	Farther	sneed i	improvments and UI adjustments			J	
	i ai ai ai		a new set of improvements and new performance for the Interface with the user.				
		Oroato	Fix bug in chat display	2		2	
			Implement RAGUpdate trigger and modification date retrieval	2		3	
			Documentation for Shell	3		5	
			Explore a solution for fixing Q2 and Q3 queries (only for website component queries)	5		5	
11	Tost of	uneunn	orted queries and edge cases	3		3	
	1631 01	unsupp	Draft for demo day slide and demo day video				
			Display sessions history - backend	5		5	
			Update bill of matrials	1		1	
			·	3		3	
			Testing output for consistency	3		3	

Sprint	Topic	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
_			Testing output for accuracy	3			
			Solution #2: Retrievers merger	8		8	
			Solution #1: Lean content hub	5		5	
12	Quality	of life f	eatures				
13	Prepare for final release						
			Create the final Software Architecture				
			Testing output for accuracy (solution 2)	3		3	
			UI adjustments	3		3	
			Find a solution for surfaced consistency issues	8		8	
			Display sessions history - frontend	5		5	
14	Final release						
			Restore deleted branches	2		2	
			Bug fix for merge conflict	2		2	
			Set up best practices documentation - one pager	3		2	
			Clean the repo	1		1	
			Finalize the documentation	3		3	

AMOS 2023ws05 - Planning Document Product Glossary

Term	Definition
RTDIP data pipeline / RTDIP configuration	Code that is based on the RTDIP framework and utilizes its capabilities. The file contains the set of components required and details the relevant devices to be interacted with.
Component	Represents a specific functionality from a set of functionality categories (like fetch, transform, store).
Block configuration	The code that calls a component and the instructions for how to use these components. Multiple block configurations make up one "RTDIP data pipeline / RTDIP configuration."
Context awareness	Ability for the chatbot to refer to the previous messages sent by the user in the current instance.
Chat history	Ability of the user to browse previous conversations with the bot.
Content store	The data upon which the bot bases its knowledge.

AMOS 2023ws05 - Planning Document Definition of Done

#	Feature Definition of Done	Sprint Release Definition of Done	Project Release Definition of Done
1	Code review has been completed and code has been merged.	Project builds, deploys, and tests successfully	User interaction tests pass on all major browsers
2	User interaction tests pass on all major browsers.		Design documentation has been updated
3			
4			
5			
6			
7			

Sprint	Topic	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
Release	В						
Total				226	226	215	
Sprints							
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2			e Architecture and Framework	33	220	27	221
3			ge Processing Integration	8	188	8	194
4			and Model Enhacement	10	180	10	186
5			nd Conversation Flow	13		13	176
6			re Communication	28		25	163
7			d simplify UI	34	129	34	138
8			testing and prepare for advanced queries input	20	95	19	104
9			nce testing and improvements	8	75	8	85
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11			rted queries and edge cases	25	55	22	62
12		of life fea		0	30	0	40
13		for final		19	30	19	40
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Feature	es						
4	Drainat	Viekeff	and Diamina				
1	Project		and Planning sh project infrastructure and team roles				
		LStabils	Create bill of materials	3		3	
			Define regular meeting with IP	1		1	
			Build process review - Homework	1		1	
2	Chatho	t Softwa	are Architecture and Framework	·		1	
	Silato		the software architecture and prepare the necessary data for training the chatbot				
		_ 5	Connect the bot to the RAG Hub	2		2	
			Pipeline workshop with IP	1		1	
			Initialize a ReadMe File	2		2	
			Collect the data for the RAG content Hub	2		2	

Sprint	Topic	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
			Initialize a RAG content Hub	8	i -	5	
			Define a third meeting with IP	1		1	
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			Create a Software Architecture Document	3		3	
3	Natural	Langua	age Processing Integration				
			p the core NLP model for chatbot understanding				
			Create and configure inference end point for the model	5		5	
			Source processing power	3		3	
4	User In	teractio	n and Model Enhacement				
		Create	wireframes and UI mockups.				
			Create a docker image to run the inference endpoint	5		5	
			Test Plan for Prompt Engineering	2		2	
			Initialize a Domain-Specific Dataset (DNS)	3		3	
5	User Interface and Conversation Flow						
		Design	the chatbot's user interface and conversation flow.				
			Finding and Configuring an alternative UI	3		3	
			Inference Endpoint and Docker Container Creation	3		3	
			Text generation inference configuration	2		2	
			Create a new docker file	5		5	
6	Refine Interactive Communication						
		Detail o	on how to communicate with the bot				
			Prepare 7 testing queries for testing week 1	2		2	
			Add OpenAl API Key to the UI	3		3	
			Add response speed measurement to test how long does it take for the response	3		2	
			Implement Caching for Faster Responses	3		3	
			Create requirement.txt	2		2	
			Enable iterative communication with the bot	5		5	
			Set up a query catalog - single source of truth	5		3	
			Developing a Model-Agnostic Approach for Enhancing Speed Performance	5		5	
7	Begin testing and simplify UI						
	Boost reliability, UX through testing, UI simplification for usability.						
			Q[1,a] - Query testing, optimization and verification	3		3	
			Clear the left UI bar	2		2	
			Add a title and Github link on the left of the UI	3		3	

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			e query testing, prepare for complex query inputs continuation.				
			Implement a script for queries construction	3		3	
			Script for Dockerizing & App Launching	3		3	
			Q[2, a - g] Query testing, optimization and verification	3		2	
			Experiment: Improve response times with a database	3		0	
			API error handling	2		3	
			Improve context awareness	3		5	
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			Script for updating the RAG content store in case changes are made to the RTDIP repo	3		3	
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	i ai ai ai		a new set of improvements and new performance for the Interface with the user.				
		Orouto	Fix bug in chat display	2		2	
			Implement RAGUpdate trigger and modification date retrieval	2		3	
			Documentation for Shell	3		5	
			Explore a solution for fixing Q2 and Q3 queries (only for website component queries)	5		5	
11	Tost of	uneunn	orted queries and edge cases	3		3	
	Test of	unsupp	Draft for demo day slide and demo day video				
			Display sessions history - backend	5		5	
			Update bill of matrials	1		1	
			•	3		3	
			Testing output for consistency	3		3	

Sprint	Topic	Goal	Feature Name	Est. Size	Est. Remaining	Real Size	Real Remaining
			Testing output for accuracy	3			
			Solution #2: Retrievers merger	8		8	
			Solution #1: Lean content hub	5		5	
12	Quality	of life f	eatures				
13	Prepar	e for fina	al release				
			Create the final Software Architecture				
			Testing output for accuracy (solution 2)	3		3	
			UI adjustments	3		3	
			Find a solution for surfaced consistency issues	8		8	
			Display sessions history - frontend	5		5	
14	Final release						
			Restore deleted branches	2		2	
			Bug fix for merge conflict	2		2	
			Set up best practices documentation - one pager	3		2	
			Clean the repo	1		1	
			Finalize the documentation	3		3	

AMOS 2023ws05 - Planning Document Sprint Goals

Sprint #	Sprint goal
1	-
2	-
3	-
4	Elevate the user experience by improving user interaction and enhancing the underlying model's performance.
5	Set up and clean the user interface (UI) and streamlining conversation flow within our product.
6	Create a more meaningful and compelling communication experience for our users by refining interactive communication.
7	Verify and test individual features for bot actions and natural language understanding.
8	Continue query testing and prepare for advanced queries input
9	Query, performance testing and improvements
10	Farther speed improvments and UI adjustments
11	Test of unsupported queries and edge cases
12	Quality of life features
13	Prepare for final release

Type	Link / reference

Documentation

AMOS 2023ws05 - Planning Document

Bill of Materials

#	Context	Name	Version	License	Comment
1	1st level dependecy	Python	3.11	OSI-approved	
2	1st level dependecy	PySpark		Apache License	
3	1st level dependecy	RTDIP SDK	v0.5.0	Apache 2.0 License	
4	1st level dependecy	Git	3.10.3	GNU	
5	1st level dependecy	HTML	5		
6	1st level dependecy	CSS			
7	1st level dependecy	Langchain	>= 0.0.184		
8	1st level dependecy	Streamlit	1.28.2		
9	1st level dependecy	OpenAl			
10	2nd level dependecy	Chromadb			

AMOS 2023ws05 - Planning Document Planning Poker

Last Name	First Name	Value			
Katziuk	Avi				
Betancourt Barrita	Cecilia		5.00	OK	
El Brak	Sara		0100		
Hazzouri	Zain Alabden	5			
Najar	Linda	5	0	No size	
Smadi	Obeidah	5	1	Trivial size	
Gtari	Nahrain	5	2	Small size	
			3	Medium size	
			5	Large size	
			8	Very large size	
			13	Too large (size)	