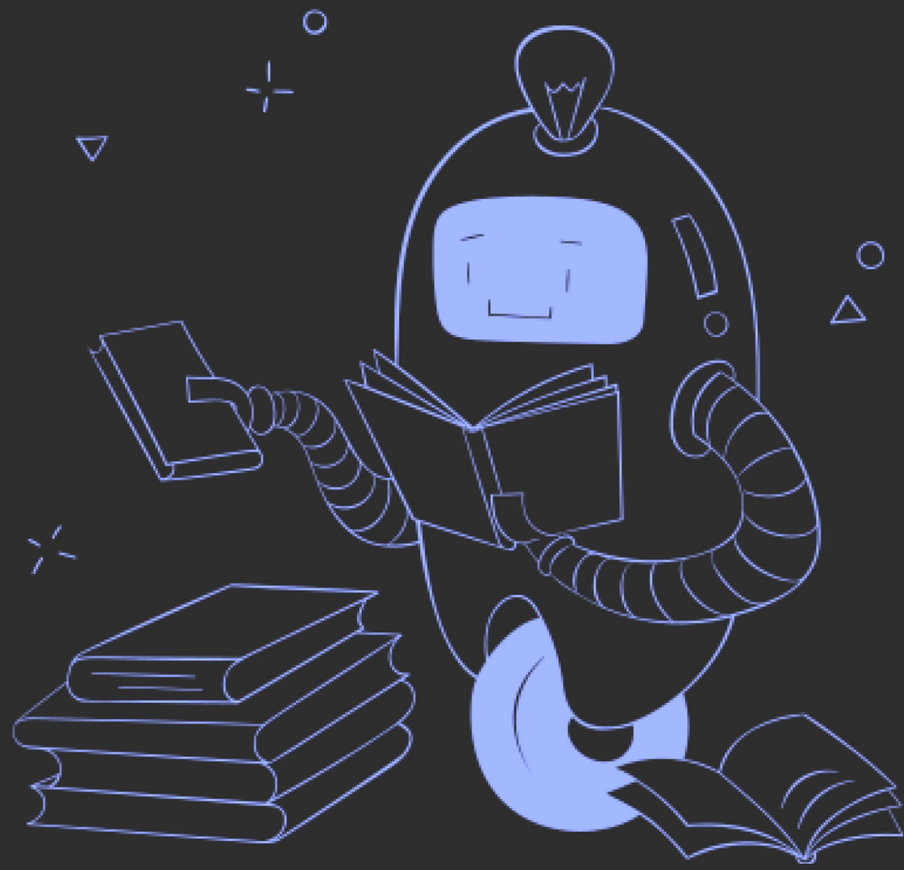
Enhancing User Experience:

Virtual Assistants in Greek University Helpdesk Service



Credits

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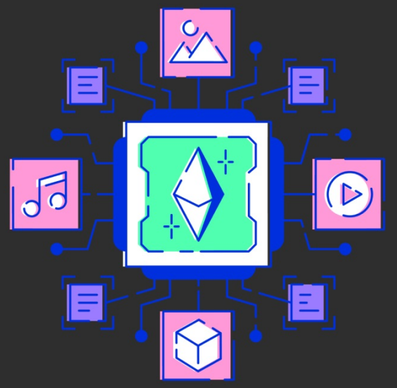
Brief

This presentation explores the impact of introducing bot-UoWM, a zero-code conversational chatbot, in the context of the University of Western Macedonia, in terms of its effectiveness in reducing administrative workload, improving user interactions, and enhancing student involvement.

Overview

Structure

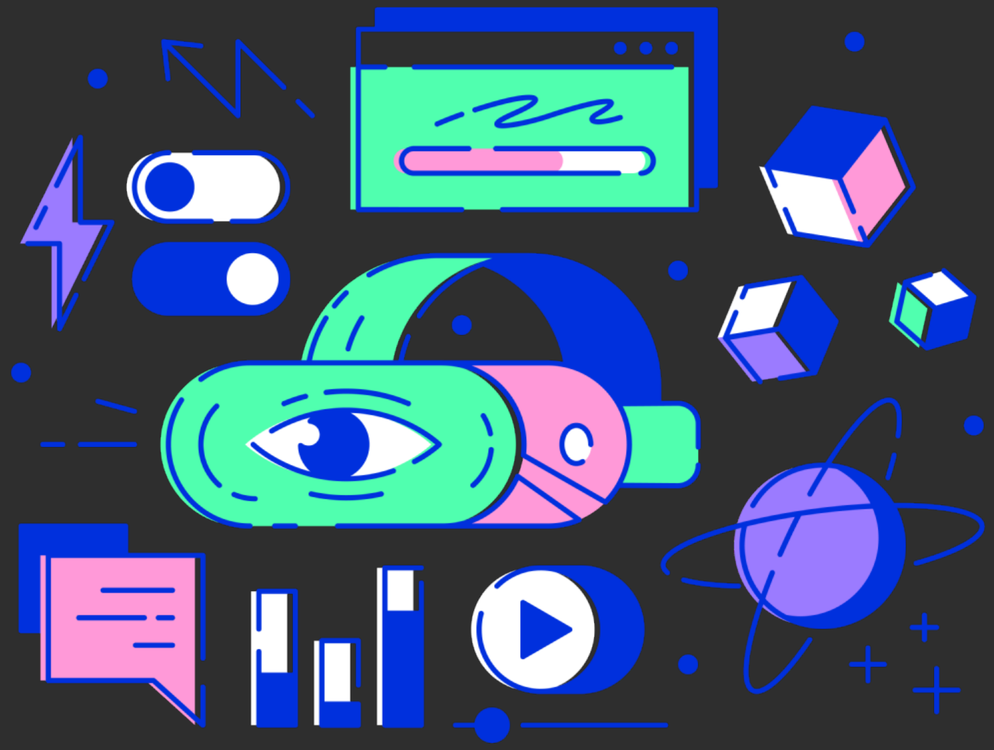


PROBLEM STATEMENT | EVALUATION | CONCLUSION

bot-UoWM

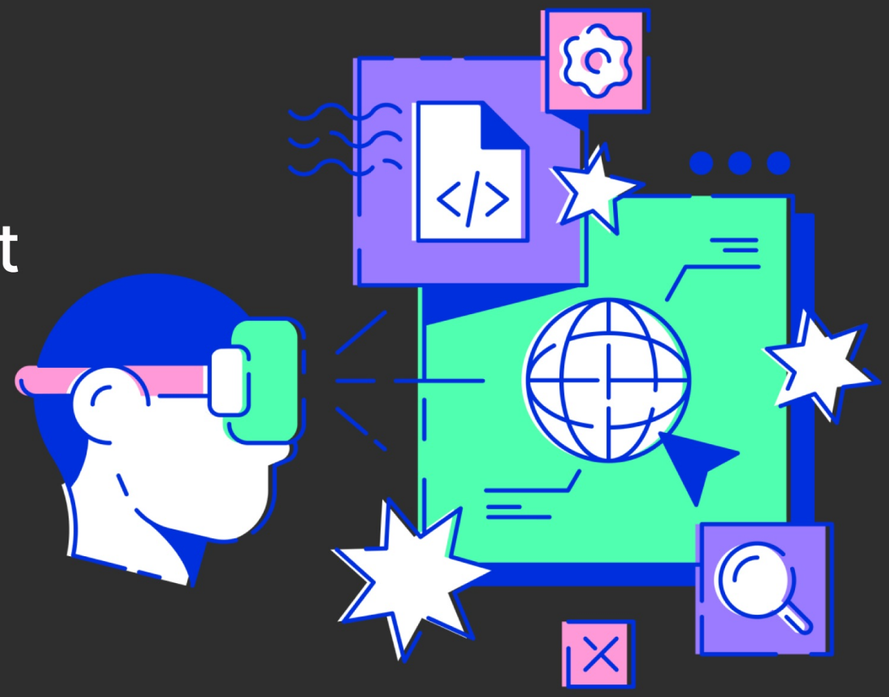
a zero-code conversation chatbot
that recognizes and answers in Greek Natural Language

Problem Statement



What is the Challenge?

- Growing demand for quick and efficient solutions for information access.
- Information is distributed to multiple outdated platforms
- Traditional comunication channels
- Huge workload on secreteriat officies



Requirements

24/7 Availability

Greek NLP

Constant Accuracy Training

Maintainability

Fast Responses

Short Responses

Easy to implement

Scalability

Device Flexibility

Multiple messaging Platforms

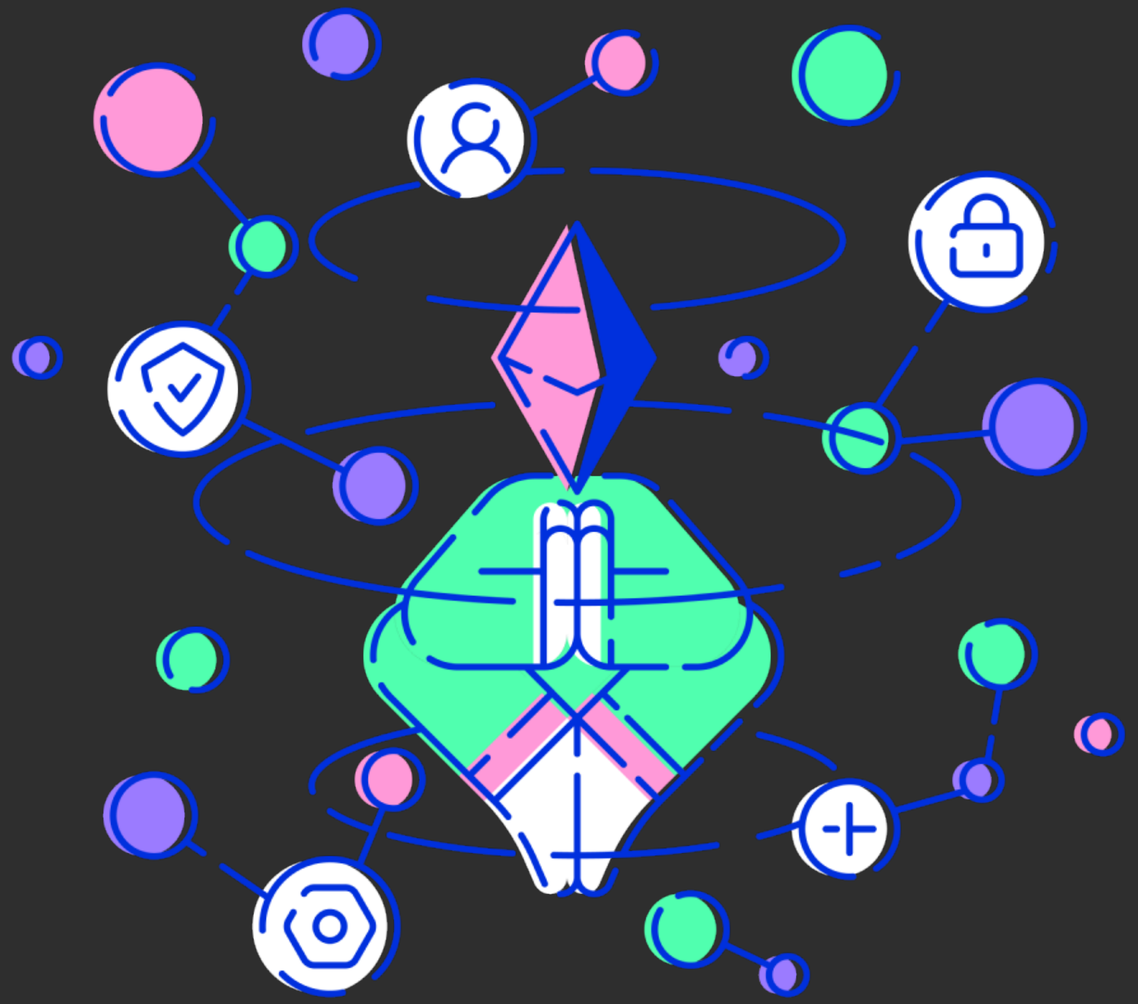
Fast build

Friendly Persona

Custom Knowledge base

No need for technical skills

bot UoWM



Actions

Implementation

Azure Microsoft

Ready-to-use technologies

Detailed documentation

Accessible helpdesk support

Active user community

Stable 24/7 server

Knowledge base

Knowledge base sourced from university webpages

Crawling and indexing techniques for data retrieval

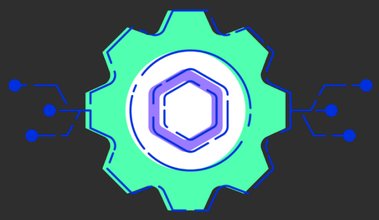
Confidence score

Confidence score for relevancy of responses.

Manually excluded corner case

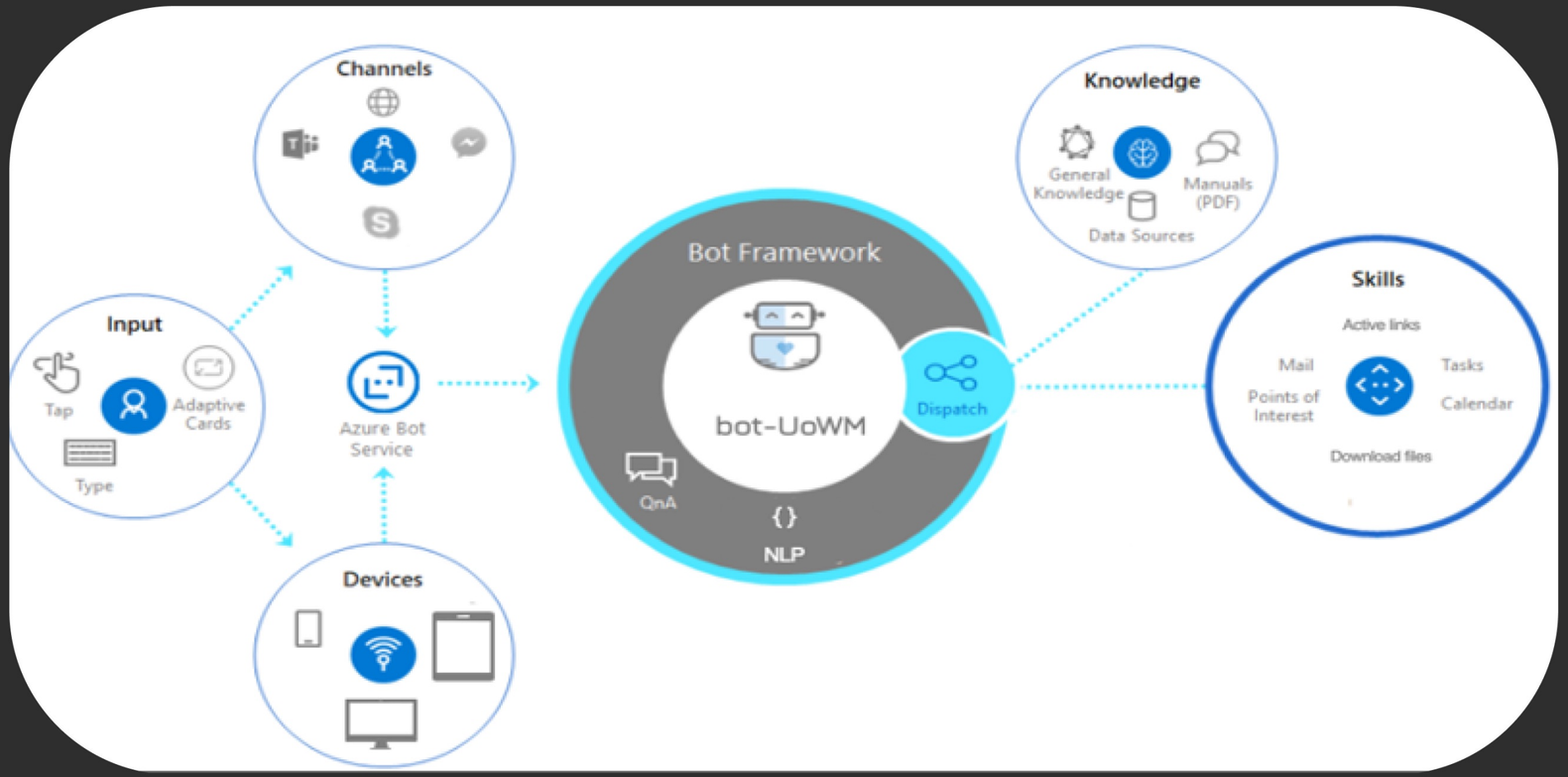
Skype, Teams, FB

Highly used, well-known platforms both for business and for personal communication

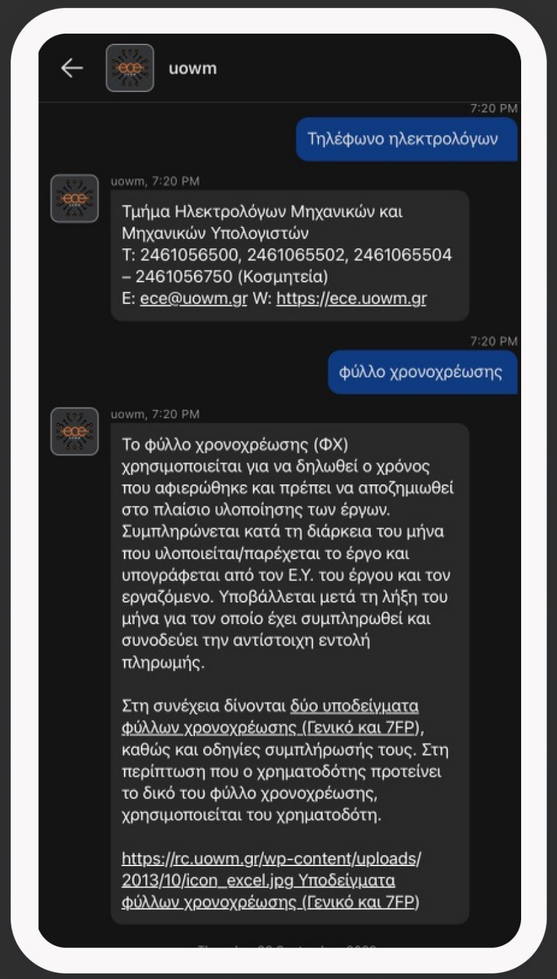


Architecture

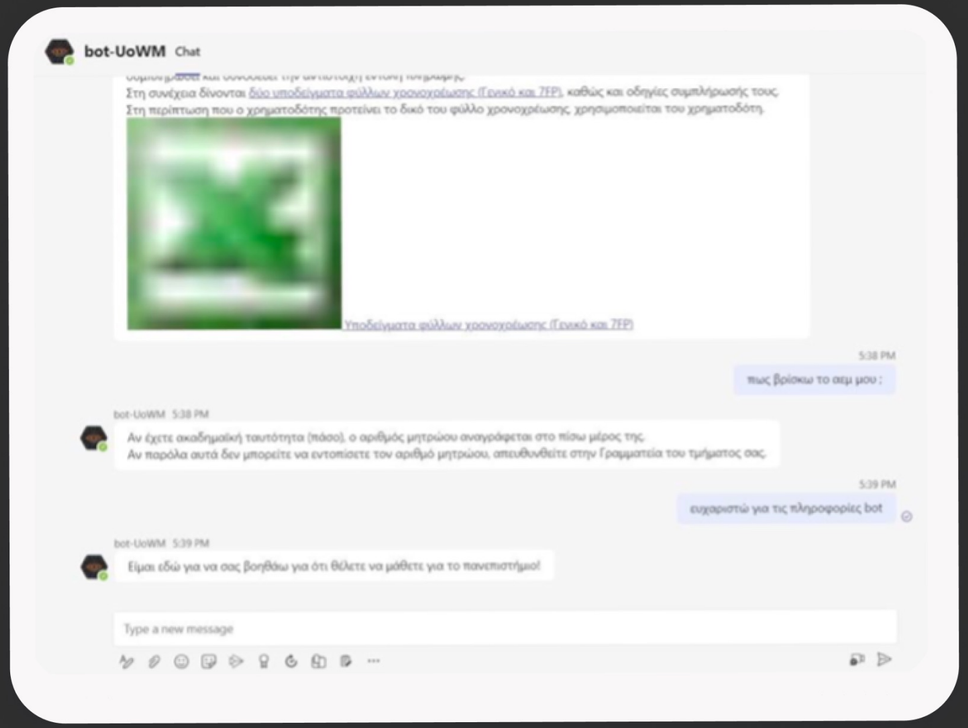
· Language Studio for NLP database creation and integration.
· Bot Framework Composer to connect to Azure and publish the bot.
· Bot Framework Emulator for bug identification if any exist.
· Azure provides connection with the communication channels.



Channels



Skype as Medium



Teams as Medium

Evaluation

Participants

bot-UoWM was evaluated by a total of 80 people

Students, Staff, and members of the Academic community of UoWM. (40 people)

People with previous interaction with the UoWM, but not members of the Academic community of UoWM. (20 people)

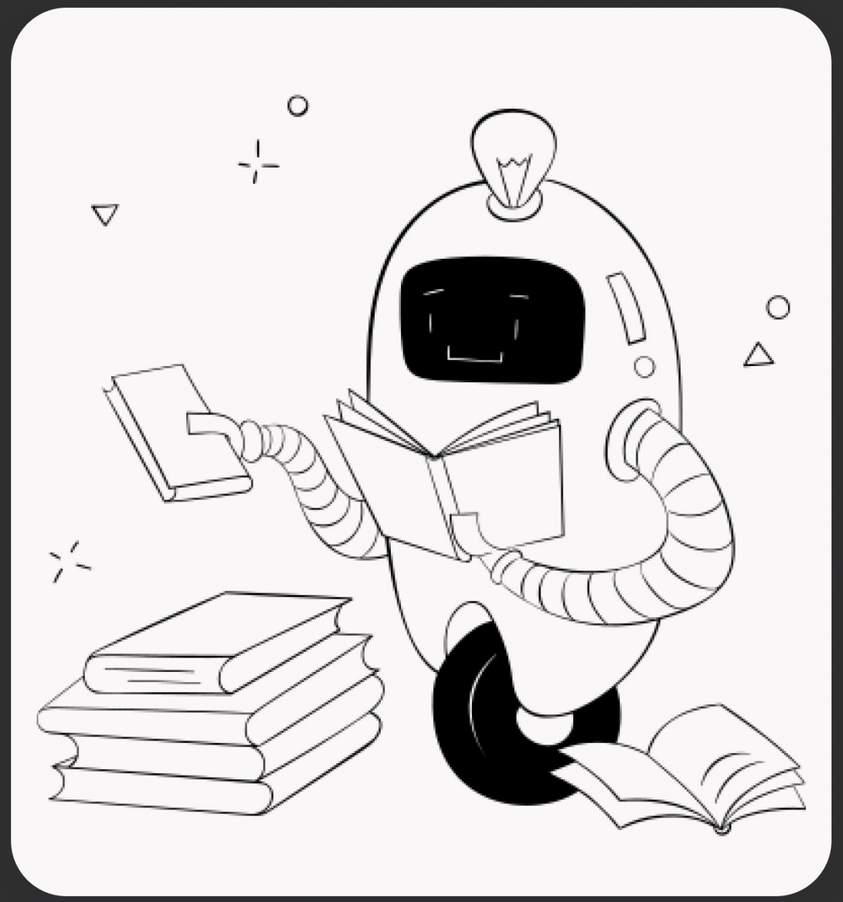
People that are unfamiliar with UoWM processes. (20 people)

Questionnaire

Group A (40 people)

Tasks related to retrieving information without bot-UoWM

Group B (40 people)



Same tasks with the assistance of bot-UoWM

Questionnaire

7 General Questions

Designed to explore participants' familiarity with chatbots and their sentiments regarding interaction with chatbots.

12 Typical and Non-Typical Tasks

4 Regarding retrieval of Academic Information

2 Regarding Administrative Procedures

1 Regarding Student Guidance

1 Regarding Scheduling and Documentation

1 Regarding Institutional Identification

1 Regarding Contact Information

1 Regarding Guidelines

4 User Satisfaction Questions

To provide feedback on their interaction and suggest improvements

Results

RQ1

Does the availability of bot-UoWM reduce the effort needed to complete tasks?

- Group B (bot-UoWM Users) demonstrated quicker task completion(avg time 36s).
- Bot-UoWM's responses were consistently rated as correct.
- Average time for information retrieval was significantly lower for Group B.
- Group A participants found the information retrieval process challenging, with 94% perceiving their answers as incorrect.
- Only 5 participants in Group A successfully completed all given tasks.

	Group A	Group B
Task	Average time (min)	Average time (min)
Provide infrastracture map.	3,4	0,8
Provide information about the history and the emblem/seal of UoWM.	4,4	0,5
Inquire about the availability of academic scholarships.	3,2	0,9
Provide details about lodging	3,2	0,6
Retrieve information about doctoral programs	4,8	0,6
Explain the procedure for accessing instructions on creating an eClass account for attending classes.	3,7	0,6
Explain the procedure for obtaining a detailed grade report or registration certificate.	3,9	0,7
Inform students studying Primary Education about important considerations.	4,5	0,7
Share guidelines for determining the hourly wage of Staff members.	4,9	0,6
Provide the document regarding the ECEs Semester Lecture time schedule	4,9	0,7
Share the PIC number of the University of Western Macedonia (ΠΔΜ).	5,0	0,6
Provide contact information for the schools under the University of Western Macedonia (ΠΔΜ),including phone numbers, websites, and email addresses.	3,4	0,6

RQ2

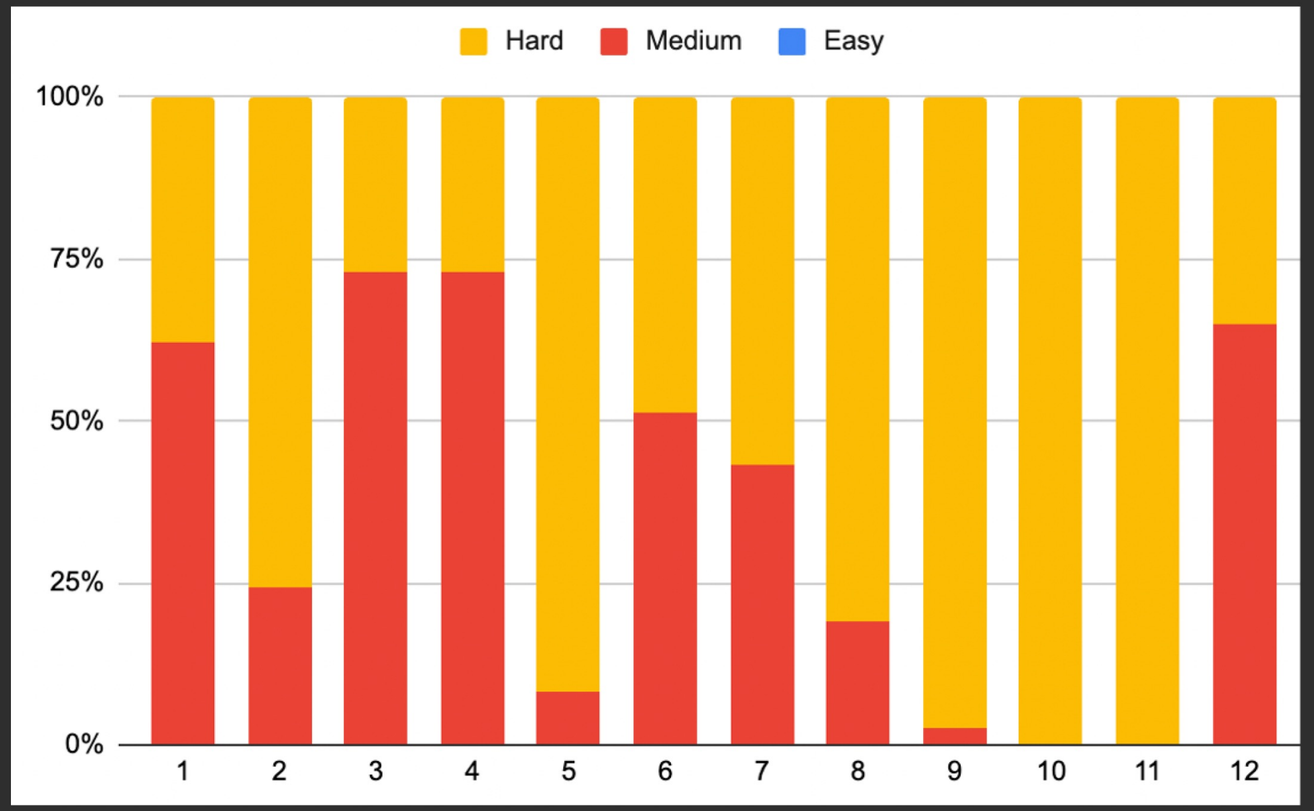
Which types of tasks can we identify that benefit most from the use of bot-UoWM?

Optimal Task Categories for bot-UoWM

Tasks characterized by lengthy information retrieval related to technical issues or associated with complex processes of UoWM

Trivial Tasks for a Virtual Assistant

Student-Related Queries



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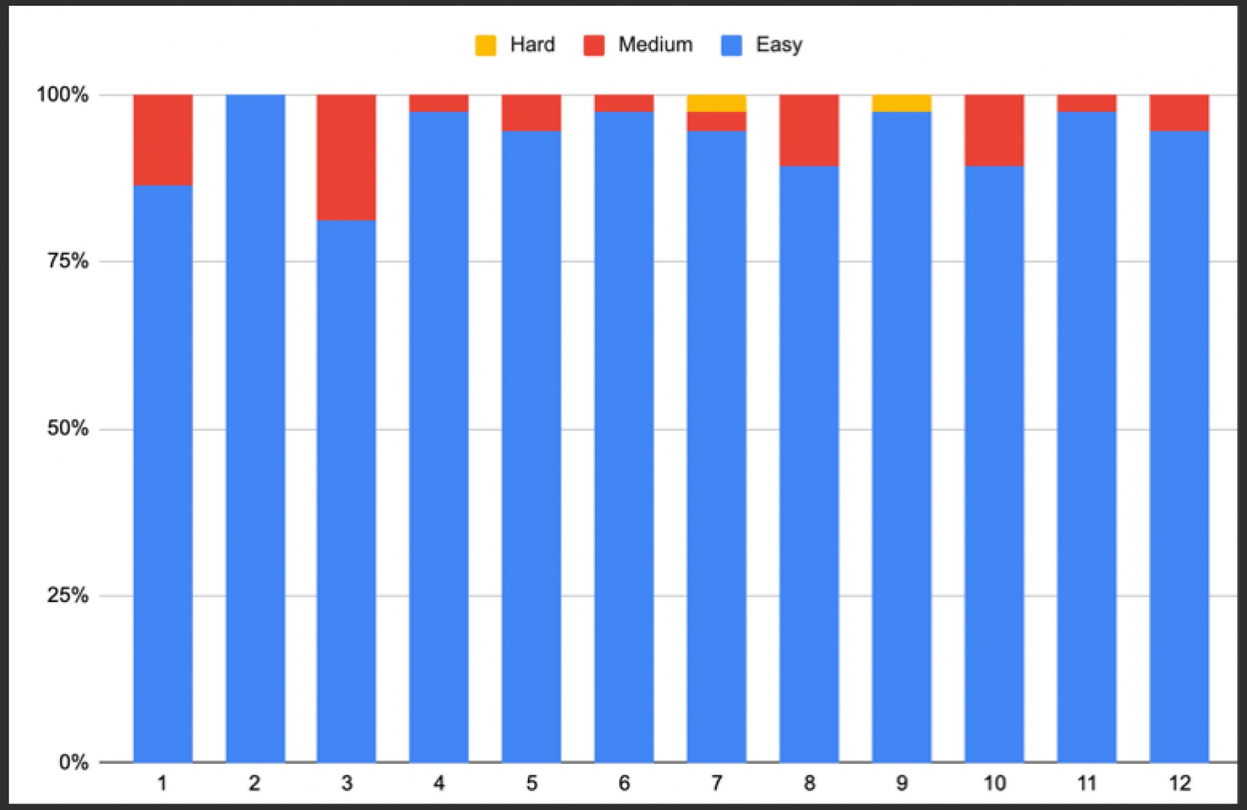


RQ3

Does the availability of bot-UoWM increase the engagement of users?

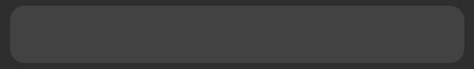
User engagement through satisfaction feedback

USQ	YES	NO
Was it easier to find information with the chatbot?	40	0
Did you like the interaction you had with the chatbot?	35	5
Are you interested on interacting with a virtual assistant bot through messaging platforms?	36	4
Are you in favor of interacting with a VA instead of human for academic advisory?	22	18

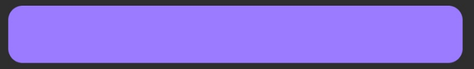
RQ3

Does the availability of bot-UoWM increase the engagement of users?

10X MORE HITS ON AZURE THAN EXPECTED



2X MORE TIME SPENT INTERACTING WITH BOT THAN EXPECTED

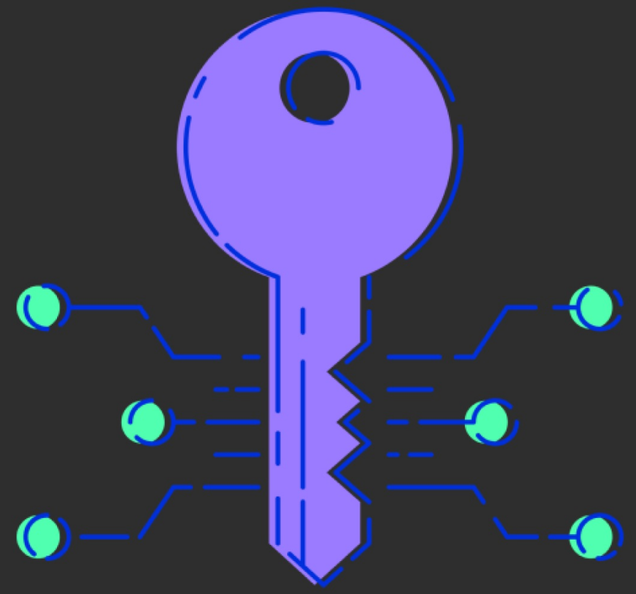


Conclusions

Coclusions

Key-points

- Improved user experience
- Reduced staff workload
- Efficient information retrieval



Coclusions

Next-Steps

Open-source Software

Expansion of Database

More Platforms

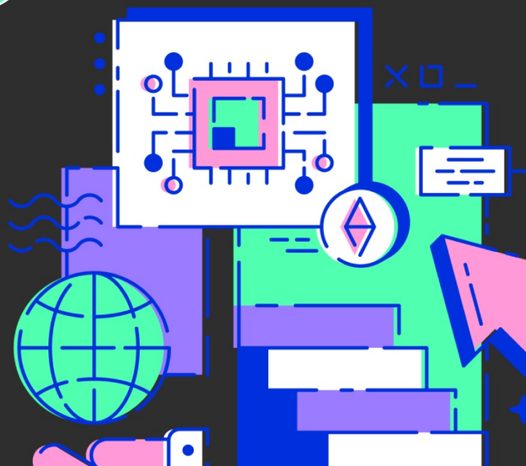
Voice Interaction support

Test on other Institutes

Other language support

IT support

Community chat



Thank you!

Any Questions?

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