



UNIVERSITY OF DEUSTO

Recommender system by Hybrid Intelligence, Adaptation and Engagement for Citizen Science

PhD dissertation by MAITE PUERTA BELDARRAIN

Within the doctoral program ENGINEERING FOR THE INFORMATION
SOCIETY AND SUSTAINABLE DEVELOPMENT

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Abstract

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Acknowledgements

QUE OS FOLLEN A TODOS!!!!!!

Thank you
Maite Puerta Beldarrain

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*The oldest and strongest emotion of mankind is fear,
and the oldest and strongest kind of fear is fear of
the unknown.*

H.P. Lovecraft

CHAPTER

1

Introduction

Lorem ipsum

1.1 Context and Motivation

1.2 Hypothesis, Objectives and Scope

Based on the reviewed barriers, pitfalls and limitations of the current State of the Art in IoT approaches and their implications in intelligent work environments, the hypothesis of the present dissertation is:

Hypothesis: Incorporating users into the decision-making loop of AI for task allocation in CS projects through the Hybrid intelligence (HI) paradigm increases the acceptance and **promote the** adoption of crowdsourcing sensing technology, effectively closing the Human-AI feedback loop.

Hence, this dissertation sets the following goal in order to validate the aforementioned hypothesis:

Goal: To design and implement a Hybrid Intelligence-based system for task allocation in Citizen Science projects, which integrates the user into the decision-making loop of AI, increasing their acceptance and **promote the** adoption of crowdsourcing sensing technology.

This general goal can be achieved by addressing the following objectives:

1. To study the current state of the art on Human-AI collaboration
2. .
3. Define a customized problem statement to be able to integrate the users in the task allocation problems in the context of Citizen Science projects.
4. To design and implement a Hybrid Intelligence-based system for task allocation in Citizen Science projects.
- 5.

The resulting optimized and interactive system should also fulfill the following requirements:

1. .

Beyond that, the work presented in this dissertation does not deal with the following conditions:

1. .

1.3 Research Methodology

1.4 Main Contributions

1.5 Thesis Outline

Always forgive your enemies; nothing annoys them so much.

Oscar Wilde

CHAPTER

2

Related work

I NTEGER

2.1 Section 1

2.2 Summary and Conclusions

Author

CHAPTER

3

Problem Statement

I NTEGER

3.1 Summary and Conclusions

Author

CHAPTER

4

MVE

INTEGER

4.1 Summary and Conclusions

Author

CHAPTER

5

Bio inspired

I NTEGER

5.1 Summary and Conclusions

Author

CHAPTER

6

Mix

I NTEGER

6.1 Summary and Conclusions

Bibliography

Declaration

I, Maite Puerta Beldarrain, herewith declare that this dissertation is my own original work, carried out as a doctoral student at the University of Deusto. All assistance received and notions from other sources have been identified as such, acknowledging their correspondent contributions and citing them properly.

This work contains no material which has been presented in identical or similar form to any examination board, except where due acknowledgement is made in the dissertation.

This dissertation was finished writing on Month Dayth, Year.