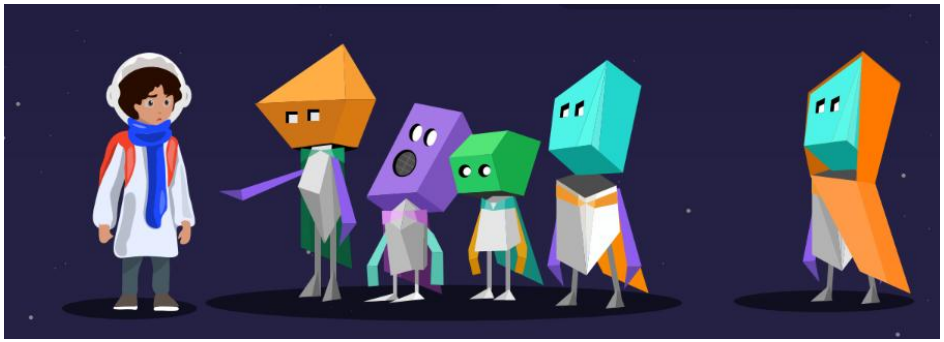
Eunopia: Mission AI
Game Workshop Learning Support Document



The game takes place on Eunopia, a planet under the influence of AI and algorithms. Eunopia is a futuristic planet where artificial intelligence and algorithms have seamlessly merged with societal functions.

At the beginning of the game the player is introduced to the human protagonist Alai, who has crash landed on Eunopia. Alai soon realises that Eunopia is under the control of AI and algorithms. Its impacts on the lives of Eunopians is more widespread than those experienced on Earth.

The Eunopians are unsure what to do about these rumours. You guide Alai on a series of missions, discovering clues and solving puzzles. Alai assists the Eunopians to understand the pervasive influence of algorithms and AI in different parts of their lives and teaches them how to control its influence and fact check the numerous rumours that are circulating.

This document is intended to support teachers, trainers and educational mediators in their use of the game in formal and non-formal education and learning contexts.

THE ADVANTAGES OF LEARNING THROUGH PLAY

- Secure Experimentation Space
- Active Learning
- Immediate Feedback and rewards
- Motivates less academically motivated students
- Learning by Doing and Through Play

GAME OVERVIEW

Eunopia: Mission AI was designed by researchers at the National University of Ireland at Maynooth (NUIM) and University College Dublin (UCD). It aims to engage players and develop their critical thinking about algorithms, AI and mis and disinformation

The starting point for the game design was the Algorithms/AI competency framework developed within AlgoWatch by Savoir Devenir, which is also used in the quizzes and accompanying documents of the project.

The design and stories were informed by co-creation sessions with teenagers in Ireland. The game was playtested with the target age group and teachers in all four partner countries.

The game can be played in two modes: full story and minigame mode, or minigame only mode. Minigame only mode provides a shorter playing experience.

The game is available to play in English, French, Croatian and Portuguese and is free to download.

Age
13-17 years

Materials Required
Internet enabled PC, tablet or mobile device. The game is accessible from the resources section of the AlgoWatch.eu website.

Key objectives

- Raise awareness of the influence of algorithms and AI on information, and more broadly in our everyday lives
- Develop critical thinking skills
- Gain knowledge about how algorithms and AI work and impact our information environment
- Develop the know-how needed to identify these technologies and mitigate their potential harmful influences, in terms of disinformation
- Fostering civic attitudes and values

Gameplay

Set on the alien planet Eunopia, the game follows the journey of the protagonist, Alai, whose mission is to help the Eunopians discover and understand the pervasive influence of algorithms and AI in their everyday lives. The player quickly realises that Eunopia is under the control of a malevolent AI, whose effects are much greater than those observed on planet Earth.

The influence of AI and algorithms on the Eunopians manifests itself through the prevalence of disinformation, the creation of echo chambers and filter bubbles, as well as the resulting societal dysfunctions and unhealthy media obsessions.

As the player explores the alien cityscape, they discover peculiar places and hidden areas. They meet and talk with Eunopians, non-playable characters (NPCs), that allow them to gather information about Eunopia and the AI's impact on their society.

The objective of the game is to uncover the truth behind the various rumors circulating on the planet. Each rumor corresponds to a series of clues that the player must collect. These rumours fall into four themes, the same as those of the Algowatch quizzes: climate change, democracy and citizenship, online relationships, health and well-being.

In addition, there are minigames in the game, designed for a shorter game experience. Each has several levels that offer puzzles designed to encourage critical thinking about different types of algorithms and AI. Each of these mini-games is an opportunity for the player to acquire new skills in Algo-AI literacy. Each time the player solves a rumor or minigame, they receive a "trophy" as a reward.

The interactions between the player and the Eunopians are metaphors for the actions that can be taken to master algorithms and informational AI systems. They interactively tell the story of the knowledge needed to understand and counter online disinformation.

Modes of Play

This game is designed as a single player game. However, it can be played in teams of two or in collective mode to encourage debate. The game has two game play choices:: full story and minigame mode, or minigame only mode.

Gameplay

The basic key functions to play the game are:

1. Use the **W, A, S, D** keys to move around the game world.
2. Press **SPACE** to interact with objects and talk to aliens.
3. Press **TAB** (key with two arrows on some keyboards) to open the map and story information.
4. Use the external computer mouse on PC, or built in mouse on mobile devices to explore the game's user interface and the minigame

As the player progresses toward verifying sources, they unlock the minigame embedded within the storyworld. This occurs when a Eunopian requests the player's assistance with their social media, or online content issue, stemming from the influence of the rogue AI affecting Eunopia. Successfully solving the puzzle resolves the issue, prompting the alien to step aside and allowing the player to continue the story or assist the next alien in need.

The minigame can also be accessed in the standalone minigame mode from the main menu of the game. Instructors or players may wish to do this for a shorter learning experience.

The minigame is designed to encourage students to reflect on how their actions can affect the algorithms and AI that influence their social media feed. The minigame has four stages, each containing multiple puzzles. When the player solves a puzzle they receive a reward and progress to the next puzzle.

Each stage focuses on introducing a subset of MIL competencies. Competencies are taught by gradually introducing interactive elements such as buttons, switches and screens, as the user progresses through the puzzles. These elements represent interfaces and options commonly seen on online platforms.

ALGO/AI LITERACY COMPETENCIES ADDRESSED

Maingame Competencies (9):

TO KNOW > knowledge *to know, to understand, to be aware of...*
Competence 10. Understanding the algorithmic mechanisms that can encourage disinformation campaigns on social media
KNOW-HOW *Be able to, know how to...*
Competence 12. Knowing how to combat filter bubbles and echo chambers
Competence 13. Being able to judge the quality of the databases (and possible biases) on which the AI and algorithms are working
Competence 14. Developing strategies to combat algorithmic disinformation and hate speech
Competence 15. Limiting the influence of recommendation algorithms on social media
KNOWING HOW TO BE *Behave in a way that ... ("soft skills" and values)*
Competence 19. Being sensitive to the ethical issues associated with informational algorithms
Competence 20. Having a well-informed and critical attitude towards the economic models underlying the systems offers, particularly free offers
Competence 21. Showing a willingness to fight against manipulation
Competence 22. Being prepared to work with others to obtain better and more reliable information

Minigame Competencies (11):

TO KNOW > knowledge *to know, to understand, to be aware of...*
Competence 1. Knowing what an algorithm is
Competence 2. Understanding how search engine ranking algorithms work
Competence 3. Knowing what recommendation algorithms can and cannot do
KNOW-HOW *Be able to, know how to…*
Competence 12. Knowing how to combat filter bubbles and echo chambers
Competence 14. Developing strategies to combat algorithmic disinformation and hate speech
Competence 15. Limiting the influence of recommendation algorithms on social media
Competence 17. Limiting the influence of recommendation algorithms on websites
KNOWING HOW TO BE *Behave in a way that ... ("soft skills" and values)*
Competence 19.Being sensitive to the ethical issues associated with informational algorithms
Competence 20. Having a well-informed and critical attitude towards the economic models underlying the systems offers, particularly free offers
Competence 21. Showing a willingness to fight against manipulation
Competence 22. Being prepared to work with others to obtain better and more reliable information

WORKSHOP EXAMPLES

The game can be played in at least three ways:

1) In pairs, as part of a workshop
2) In group mode with a video projector, and instructor or students playing at the top of the room.
3) Individually, in class, at an exhibition or at home

In the discussion part of our workshop examples learners are encouraged to analyse the strategies they used to succeed in the game, and draw connections to their real-life experiences with algorithms and AI.

PERSONAL DATA

In accordance with the GDPR, this game does not collect any personal data. The only metrics collected are the number of games played and the percentage of players who have completed their missions.

ACCESS THE GAME

The game is available free to download from the Algowatch project website - https://algowatch.eu/resources/game/

The game can be played in any contemporary browser or downloaded to be played offline on PC, tablet or mobile phone.

See additional technical specifications on the Algowatch project website under resources.

Example of a 45 minutes workshop

- Target age group: 13+
- 1 computer or tablet per student or shared.
- Game Mode and Story: teacher's choice, linked to curriculum

Content	Timing	Content	Objectives
Introduction	10 min	Instructor introduces the session and the key concepts, including mis and disinformation and fact checking. They then introduce the game concept and story. They are directed to https://algowatch.eu/resources/game/ to access the game. They are instructed to choose their language and to choose between story mode or mini game mode. If they choose story mode they are instructed to choose 1 story that is relevant to the curriculum goal. Outline how to move around the screen, where the game menu and game map are to be found.	Introducing the game objective and learning outcomes
Gameplay	25 min	Players work individually, or in pairs to communicate, discuss and strategise how to progress in the game. Players should be encouraged to 'talk out loud' and take notes. The instructor may choose to use an activity sheet to encourage players to take notes as they discover clues and solve puzzles.	Acquire key knowledge and skills in Algo/AI Literacy

Discussion	10 min	The instructor or teacher solicits reactions, frames the debate and provides additional information if necessary. All participants note what they have learned, what surprised them, etc. They are encouraged to continue to play after the class in their own time. They can choose another story or redo the mini game to progress further.	Reformulating learning

Example of a 90 minute workshop

- Target age group: 13 +
- 1 computer or tablet per student or shared.
- Game and Story mode: teacher's choice, linked to curriculum

Content	Timing	Content	Objectives
Workshop introduction	5 min	Introduce the goals of the session	Introducing the project objective and learning outcomes of the session.
Gathering young people's perceptions of AI and informational algorithms and understanding of mis and disinformation	15 min	Debate Creation of a collective word cloud or general discussion.	Gather ideas, preconceived notions, fears, fascinations, hopes, criticisms... from the public in an opportunity/risk approach
Eye opener activity	10 min	Choose one ‘eye opener’ from the tool kit.	Understand how algorithms or AI works.

Introduction to game	10 min	Instructor introduces the session and the key concepts, including mis and disinformation and fact checking. They then introduce the game concept and story. They are directed to https://algowatch.eu/resources/game/ to access the game. They are instructed to choose their language and between story mode or mini game mode. If they choose story mode they are instructed to choose 1 story that is relevant to the curriculum goal. Discuss that they need to solve puzzles and work out how to progress. Outline how to move around the screen, where the game menu and game map are to be found.	Introducing the objective of the game and its learning outcomes
Gameplay	35 min	Players work individually or in pairs to communicate, discuss and strategies how to progress in the game. Players should be encouraged to 'talk out loud' and take notes. The instructor may choose to use an activity sheet to encourage players to take notes as they discover clues and solve puzzles. The instructor or teacher provides additional information and support if necessary.	Acquire key knowledge and skills in Algo/AI Literacy
Discussion	15 min	The instructor or teacher solicits reactions, frames the discussion and provides additional information if necessary. All participants note what they have learned about algorithms, rumours, and skills, what surprised them, etc. They are encouraged to continue to play after the class in their own time. They can choose another story or redo the mini game to progress further.	Reformulating learning