Artificial Intelligence for High School Girls

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Abstract

Artificial intelligence (AI) is changing the world, particularly in teaching and learning processes, work models, and communication. AI tools are typically developed by specialists in the fields of computing and engineering, which, as is widely known, are predominantly male. At the University of Brasília, for example, only 10% of the students in the computer science major are women. Furthermore, for the development and programming of AI tools, the participation of women is fundamental, ensuring that algorithms and models are created more inclusively and diversely, without gender bias. In this context, this paper describes a project aimed at attracting female high school students of a school at Santa Maria, a region of the Federal District, Brazil, to pursue studies in Computing through the lens of AI. To this end, female students and professors from the University of Brasília developed educational materials focused on high school students to introduce key AI concepts. This material and its application in the classroom aim to inspire and encourage women to enter STEM (Science, Technology, Engineering, and Mathematics) fields, especially in computing. This activity is part of the Meninas.comp project, which has been promoting events, workshops, and school projects to develop technical skills, increase interest in technology, and strengthen the confidence necessary for participants to act professionally and become protagonists in these fields.

Keywords

Women in computing, Women in STEM, Girls, High School, Artificial Intelligence (AI)

1. Introduction

The fields of computing and engineering exhibit low gender diversity and are predominantly male-dominated. To change this reality, national and international initiatives have been established to discuss and address this challenge [1, 2]. Among these actions, a notable example is IEEE Women in Engineering (WIE), from the Institute of Electrical and Electronics Engineers (IEEE), in the United States, which specifically addresses this issue. In Brazil, the Brazilian Computer Society (SBC) created the *Meninas Digitais* (Digital Girls) program [3], which aims to encourage greater female participation in computing.

On the other hand, the field of Artificial Intelligence (AI) is deeply transforming the world and has changed several areas of knowledge, such as education, health, law, and communication, in addition to society in general. Specifically, AI has gained relevance in high school education [4, 5]. In this context, a project was created at the University of Brasília to discuss AI with female high school students from a school in Santa Maria, a region of the Federal District, Brazil, from a perspective that values gender diversity.

The development of AI requires professionals with solid computing training. Therefore, introducing AI discussions to high school girls is an important initiative to promote inclusion and diversity in a rapidly growing field in the world. By introducing young women to AI concepts and practices early on, their opportunities to participate in a field that is shaping the future of society are expanded. This effort not only reduces gender disparities in STEM fields (Science, Technology, Engineering and Mathematics) — especially in technology and computing — but also fosters creativity and innovation, as diverse perspectives are essential to solve complex problems. In addition, by empowering high school girls with technical skills and knowledge, pathways are created for them to become protagonists in the development of solutions that positively impact their communities and inspire future generations to pursue careers in science and technology.

In this context, this paper presents the teaching project developed by University of Brasília female students and professors, to discuss AI with high school girls. The material, developed by the AI team of the Meninas.comp project, aims to popularize this topic in high school, with the goal of attracting girls to computing and engineering majors. 'AI for high school girls' is linked to the Meninas.comp project, created in 2010, which is dedicated to promoting gender diversity in computing, targeting students of basic education in the Brazil region.

This paper is divided into seven sections. Section 2 presents concepts related to the use of AI in high school. Section 3 shows related work found in the literature. Sections 4 and 5 present the lesson plan and its application in a high school, respectively. In Section 6, the results obtained are discussed. Finally, in Section 7, the paper is concluded and future work is proposed.

2. AI in High School

AI is a field dedicated to the development of systems that simulate human cognitive abilities, such as learning, logical reasoning, and decision-making. In computer science, various AI methods and tools are proposed and implemented, which are applied across multiple domains of knowledge. In the field of education, this technology has transformed the way knowledge is delivered and acquired. One example is the use of intelligent tutors, which offer personalized support by identifying learning gaps and providing specific content tailored to each student's needs. Adaptive learning platforms also play an important role by automatically adjusting the pace and difficulty level of activities to promote a more individualized learning experience [6].

In addition, predictive analytics enables educators to anticipate learning challenges based on collected data, helping to develop targeted strategies to improve results [7]. For inclusion and accessibility, tools such as educational chatbots and automated feedback systems facilitate interaction between students and teachers. These technologies promote greater autonomy, reduce administrative workload, and allow educators to focus more on the teaching and learning process [8].

AI also offers new possibilities for student engagement by incorporating interactive simulations and gamification into the learning process. These resources increase student motivation and create opportunities for them to explore hypothetical scenarios and develop practical skills in safe virtual environments [2].

3. Related Work

This section presents studies found in the literature that examine initiatives focused on discussing AI in high school and strategies to encourage female participation in computing. In fact, AI in high school has been explored in various ways, taking advantage of its benefits both within the educational process itself and as a tool to attract girls to computing majors, thereby contributing to increasing female representation in STEM fields.

One of the main challenges in introducing AI into high school is the development of accessible and engaging teaching approaches. Freitas et al. [9] reported on the experience of an introductory course aimed at high school students, in which active methodologies were used to bring AI concepts closer to the daily reality of the students. The results indicated a significant increase in the interest of the participants in the field, highlighting the importance of practical and interactive approaches.

The inclusion of girls in AI education has also been the focus of recent research. Alvarez et al. [10] proposed an AI curriculum specifically designed for high school girls stressing socially relevant applications. It was demonstrated that a learning environment tailored to address students' real-life concerns can increase their motivation and engagement in computing. Andrade et al. [11] presented a case study from the Lovelace Court (*Corte de Lovelace*) project, which promoted interactive workshops to introduce computational thinking and AI concepts to girls. The study underscored the value of practical and contextualized activities to make AI more accessible to this audience.

In addition to gender inclusion initiatives, some studies focus on implementing AI education through school laboratories. For example, Bressler [12] described the creation of well-equipped spaces to teach robotics, home automation, and AI in an integrated manner. The experience demonstrated that adequate infrastructure and consistent curricular planning are key factors for the successful adoption of these technologies in high schools.

Another approach is the use of inquiry-based methodologies to teach AI. Andrade et al.[13] explored the use of inquiry-based learning in the STEM context, showing that this strategy can enhance students' interest and understanding of AI. Similarly, Webber et al. [14] reported experiences with new computational methodologies in high school, emphasizing the importance of adapting content to students' prior knowledge.

These studies highlight the need to propose structured initiatives for discussing AI in high school, as well as the importance of efforts aimed at promoting female inclusion in computing. Our paper shares with those initiatives in the literature the concern of making AI more accessible and relevant to high school students, especially girls. Like Freitas et al. [9], we sought a practical and interactive approach to increase participant interest, using visually appealing resources and activities with accessible platforms. Alvarez et al. [10] and Andrade et al. [11] also highlight the importance of content connection to students' daily lives, which we intend to reflect by discussing real-world AI applications during the lesson. The learning proposal based on the research by Andrade et al. [13] and the focus on STEM are in line with our intention to promote critical and interdisciplinary engagement. Unlike Bressler [12], who emphasizes the need for advanced infrastructure, our paper prioritized free and accessible tools, enabling replication in lower-resource contexts. Lastly, as in Webber et al. [14], we started from the principle of adapting the content to the students' prior knowledge, which proved fundamental to the success of the activity.

4. Lesson Plan on AI for Schools

By offering young students the opportunity to learn AI in a welcoming and inclusive environment, the Meninas.comp project plays a key role in deconstructing gender stereotypes, strengthening the confidence of female students in their technical skills, and inspiring them to pursue careers in computing. In the long term, this approach contributes to building a more diverse and innovative workforce. By empowering young women with AI knowledge and tools, the project sows the seeds of a more equitable future where technology is developed and shaped by a broad diversity of voices and perspectives. Thus, this section presents the methodology for creating teaching material, specially developed for high school girls. The goal is to clarify concepts in the field and foster interest in computing, promoting a transformative learning experience.

4.1. Analysis and Study of Basic Concepts

Initially, a survey of relevant publications and tools of AI was carried out, focusing on topics such as Machine Learning (ML), Natural Language Processing (NLP), chatbots, and ethics. After, topics were identified and selected to be adapted for high school girls, ensuring accessibility and appropriateness for the target audience. In this step, "Capture the Power of Generative AI" by Intel[1] and "AI Programs for Middle School Students" by Inspirit AI[2] stood out.

Next, each team member was responsible for deepening the selected topics and preparing them for presentation in the classroom. This step aimed to promote knowledge sharing among team members and produce a detailed report that would serve as the basis for the development of the didactic material.

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[1]https://intel.com.br/content/www/br/pt/artificial-intelligence/generative-ai.html
[2]https://inspiritai.com/ai-program-middle-school

4.2. Development of Teaching Materials

After the initial steps, the concepts were adapted to a language accessible to high school students, aiming to simplify learning and considering students' lack of knowledge in the area. The reports previously produced served as a basis for a presentation of theoretical content, organized into slides created on the Canva platform[3].

To facilitate the understanding of the concepts, the team adopted a pedagogical approach using analogies and simplifications. A highlight was the metaphor of the "curious child" to explain AI as a system that learns from examples, such as images, texts, and voices. Distinctions were also made between AI and ML, presenting the former as a broad field that simulates human reasoning, and the latter as the training of machines with data for specific tasks. NLP was explained through practical steps such as tokenization and word normalization. Algorithmic bias was addressed as the reproduction of prejudices in data, with suggestions such as data diversification and human review.

During this process, ChatGPT-4[4] was used to support the definition of the structure of theoretical presentation, as well as to suggest content and teaching approaches. ChatGPT-4, an advanced version of the OpenAI language model, is capable of generating texts, proposing ideas, and creative solutions based on text input. Its effectiveness in planning and organizing was important to creating more dynamic and interactive teaching materials. The choice of ChatGPT-4 reinforces the aim of the project, using AI itself to help create teaching materials on AI.

For the development of the practical class material, the team focused on ML demonstrations. Platforms Machine Learning for Kids[5] and Scratch 3[6] were selected. Machine Learning for Kids is an educational tool that introduces ML concepts through interactive projects, while Scratch 3 is a visual programming environment that facilitates the creation of games and animations. Both platforms were chosen for their accessibility and ability to make complex concepts more understandable. Finally, the manuals have been translated and adapted for use in the classroom, with the aim of ensuring more inclusive and easier learning.

To make the content more attractive and accessible to the students, the teaching material was designed with a fun and thematic aesthetic, reminiscent of pixelated games and super-heroines. The slides used in the theoretical class present a visual language that seeks to engage the target audience and make learning lighter and more interesting (Figure 1).
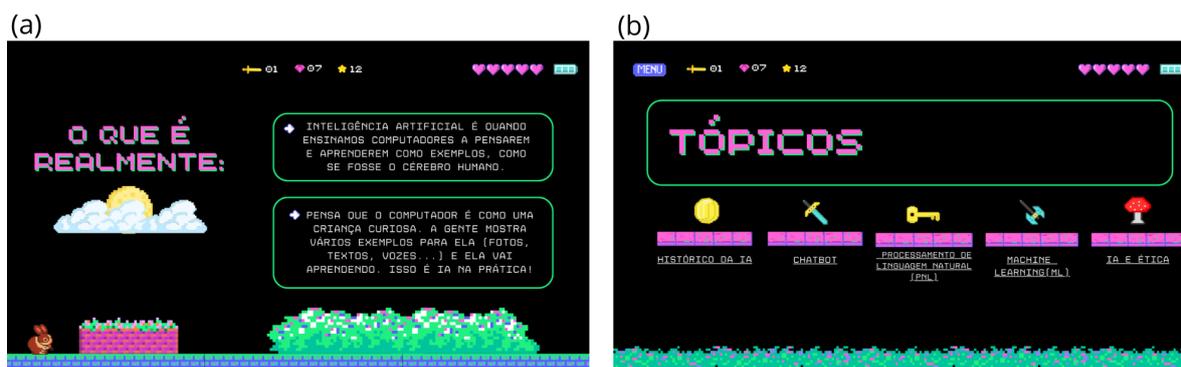

Figure 1: Example of slides (in Portuguese) used in the theoretical lesson. (a) This slide explains AI using an analogy with a curious child who learns from examples, such as images, texts, and voices. (b) This slide presents the main topics covered in the class: history of AI, chatbots, NLP, ML, and ethics in AI.

The practical ML manual (Figure 2) has been designed with an illustrated step-by-step guide, explaining in detail how to use Machine Learning for Kids together with Scratch, including images of the blocks used and clear instructions for building the projects.
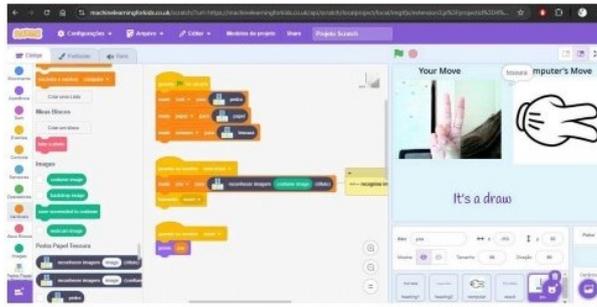
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[3]https://canva.com/

[4]https://chatgpt.com/

[5]https://machinelearningforkids.co.uk/

[6]https://scratch.mit.edu/

Figure 2: Manual for learning how to make the *Rock, Paper, Scissor* game.

4.3. Class Structure and Dynamic Assessment

The class was structured in four main parts. Before starting the actual content, **the first part** included applying an initial questionnaire to assess students' prior knowledge about AI (Table 1). Then, AI concepts were introduced through the presentation of the teaching material. The content covered the following topics: the history of AI, chatbots, NLP, ML, and ethics in AI.

Table 1
Summary of the questions from the questionnaire applied before the AI class

Initial Questionnaire Questions
Have you ever heard of "Artificial Intelligence" (AI)?
What do you think AI is?
Do you know what an algorithm is?
Have you ever heard of an algorithm?
Have you ever used or interacted with any chatbot (e.g., ChatGPT, Gemini)?
How was that experience?
Have you heard of "Natural Language Processing" (NLP)?
What do you think NLP does?
Do you know what "Machine Learning" means?
Have you ever thought about the impacts of AI on society?
Do you think AI can be used unfairly or dangerously? Why?
What would you like to learn about AI in this class?

The second part consisted of a practical demonstration using the tools Machine Learning for Kids and Scratch 3 to teach supervised ML concepts in a simplified way. The activity involved image recognition, with the active participation of students in training a model using the game Rock, Paper, Scissors played with hand gestures. During the activity, the computer had to be trained with images captured by the webcam, which were processed in the Machine Learning for Kids tool to create an ML model. Throughout the process, the computer learned to identify patterns of colors and shapes in the collected images, enabling it to later recognize new photos.

After training, the model was integrated into a pre-configured game on the Scratch 3 platform. At this stage, the webcam was used to capture images of students' hands, and the trained model interpreted these images, identifying whether they represented rock, paper, or scissors. This interaction allowed students to visualize, in a practical and interactive way, the results of the training and to understand how image recognition works. This hands-on experience facilitated the comprehension of how recognition systems operate, highlighting the importance of the quality and quantity of examples used.

In the third part, after completing the practical demonstration, the class concluded with a dynamic learning assessment. An interactive *quiz* with 10 questions based on the content presented was applied to verify students' understanding. The three participants with the best scores received special prizes as a form of recognition.

In the fourth part, the instructors applied a perception and feedback questionnaire about the AI class (Table 2). This instrument allowed students to evaluate the class both overall and by topic, as well

as provide suggestions for future projects. The questionnaire serves both as an assessment tool and as input for research and the improvement of future activities.

Table 2
Summary of the questions from the questionnaire applied after the AI class

Final Questionnaire Questions
1. Educational Grade
2. Age
3. Had you heard about Artificial Intelligence (AI) before the class?
4. How do you rate your understanding of the topics presented?
5. Evaluation of the class topics in terms of interest and clarity (scale from 1 to 5)
6. Are you interested in learning more about AI?
7. If you answered "Yes" or "Maybe", what kind of content or approach would you like to learn in a future class?
8. What was the coolest or most interesting part of the class for you?
9. After the class, how would you define AI?
10. Do you feel more familiar with what a *chatbot* is?
11. How would you explain in your own words what Natural Language Processing (NLP) is?
12. Do you remember what Machine Learning (ML) is? Can you explain it in your own words?
14. Do you think AI can be used unfairly or dangerously? Has your opinion changed after the class?
15. Do you have any suggestions to improve the class or any compliments?
16. How do you feel about exploring careers or fields related to AI?
17. How do you evaluate the importance of activities like this for high school girls?

5. Lesson Implementation

The lesson was held at the Centro Educacional 310 de Santa Maria in Federal District, Brazil, with the participation of 15 high school students, the majority of whom were female. The predominant age group of the participants was between 16 and 18 years old. The activity was held in a computer lab, with *notebooks* available for all participants. The students could choose whether they preferred to complete the activities individually or in groups of up to four people, forming pairs, trios, or quartets according to their preference.

5.1. Initial Questionnaire Results

As described in the previous section, to assess students prior knowledge and interest in AI, an initial questionnaire was applied (Table 1), with the objective of gathering perceptions, verifying familiarity with the topic, and understanding student expectations regarding the activity. The majority of students (93.3%) reported having heard of AI. Only one student answered negatively, indicating prior familiarity with the term, although not always with a clear definition.

Perceptions about AI

Answers to the open question *"What do you think Artificial Intelligence is?"* indicated that students broadly understand AI, mainly associating it with robots, technological tools, and systems that mimic human thinking. An example from a 16-years-old student was: *"Artificial Intelligence is a set of technologies that enable computers to perform advanced functions"*. Some responses indicated uncertainty or poor conceptual grasp, as shown in Table 3.

Experience with Chatbots

The results showed that 86.7% of the students had interacted with chatbots, such as virtual assistants, or tools as ChatGPT. The experience was mostly positive, with emphasis on using it to study. An example

Table 3

Main ideas, example answers, and frequency of responses about what AI is

Main Idea	Example Answers	Frequency
AI as a robot or assistant	"It's a virtual robot that helps us." "A bot that answers questions."	High
AI as a response technology	"A tool to get answers."	Medium
AI as imitation of humans	"It mimics human intelligence."	Medium
Doesn't know or is unsure	"I don't know." "I think it's cool."	High

response from a 17-years-old student was: "Really cool, I like to use it to study because they create questions related to what we are studying".

Familiarity with AI Concepts

The questions about NLP and ML showed low familiarity. As shown in Figure 3, the majority of students reported not knowing, or not being able to explain these concepts. A common response to the question "What do you think NLP does?" during the lesson was: "I don't know what that is".
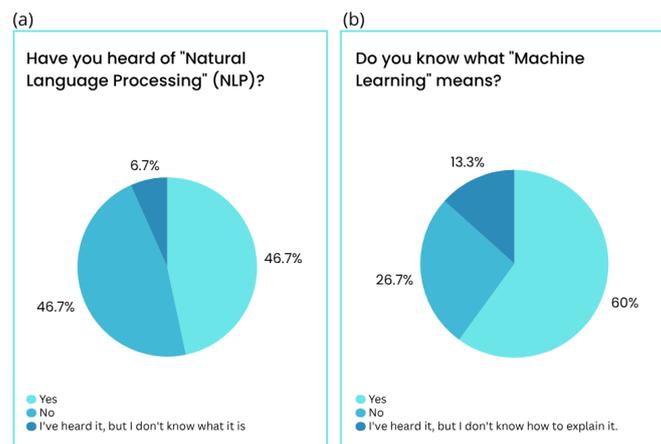

Figure 3: Familiarity with NLP (a) and ML (b) concepts.

Reflections on AI Impacts

The majority of students (80%) had already thought about the impacts of AI on society. Many open responses expressed ethical, social, and educational concerns, for example: "Yes, like fake people to scam others!" and "Yes, an example is the new ChatGPT feature, the *Ghibli style*, which steals the studio's art to create poorly made and soulless images".

Students' Topics of Interest in AI

Table 4 presents the topics students were interested in learning about during the lesson.

5.2. Performance and Engagement in the Practical Activity

The practical activity — training a ML model to play "Rock, Paper, Scissors" — was one of the most engaging moments. With the support of the instructional team, the students followed the manual and actively participated in the process, using the webcam to capture images of their hands and feed the model on the Machine Learning for Kids platform. Success was evident when they integrated

Table 4
Topics students would like to learn about in the lesson

Stated Interest	Example Responses	Frequency
How AI works	"Understand how the systems work."	High
	"How it works."	
How to create an AI	"How to create an AI."	Medium
Responsible use of AI	"How to use AI without harming school life."	Medium
General curiosity / doubt	"I don't know."	Low
	"Learn about AI."	

their models into Scratch 3 and observed the system correctly recognizing the gestures. All students completed the task successfully, without significant difficulties.

5.3. Results from the Perception and Feedback Questionnaire on the AI Class

After the theoretical presentation and practical demonstration, following the structure presented in Section 4.3, the final questionnaire (Table 2) was analyzed in order to assess the students' understanding and engagement. A significant improvement was observed regarding concepts such as chatbots, NLP, and ML.

General Understanding and Interest

The results indicated that the class promoted an understanding of the concepts. No student reported not understanding anything, which is already a significant achievement. The sum of students who said they understood well or completely is 73.3%, as shown in Figure 4a. Interest in learning more was high: 93.4% of students answered "Yes" or "Maybe" to the question about learning more about AI, as shown in Figure 4b. In open responses, they expressed curiosity about how AI works and its history, ML, applications, and the mechanisms behind the technology. One example from a 17-year-old student: "I would like to learn how the AI mechanism works".
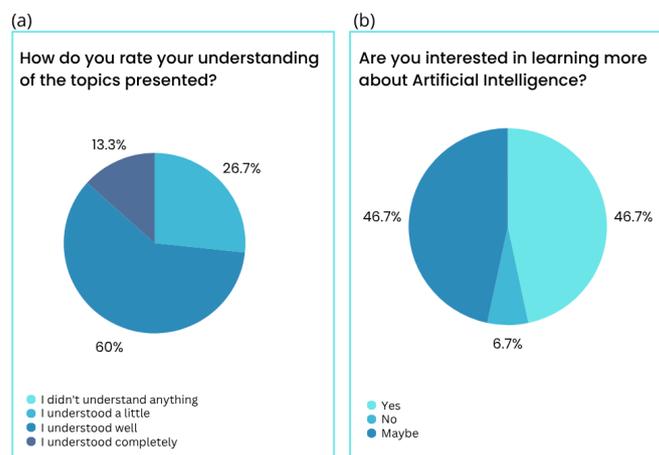

Figure 4: Understanding and interest in learning more about AI. (a) Presented topics. (b) Artificial Intelligence.

Evaluation of Covered Topics and Interesting Aspects

Students evaluated each topic in the class on a scale from 1 (didn't like/didn't understand) to 5 (liked a lot/fully understood). In Figure 5, the most frequent rating is 3 for all topics. The topic **History of AI** had ratings mostly around 3, while topics such as **AI and Ethics** and **NLP** showed more variability in responses.
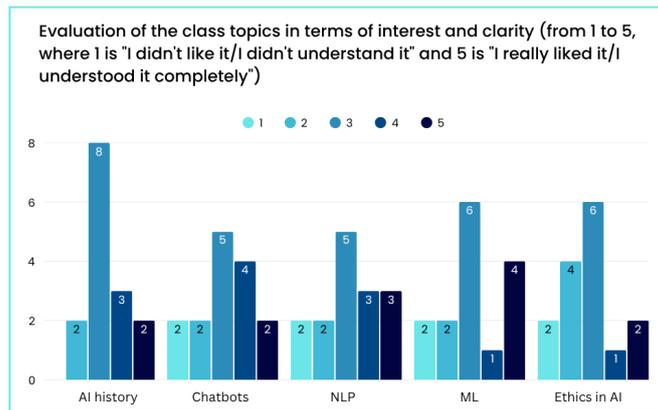
Figure 5: Evaluation of covered topics.

Open responses showed students were excited about the way contents were presented, especially the ML demonstration. Many said "everything was interesting" or mentioned specific activities, such as using AI to play *Rock, Paper, Scissor*, and the discussion about AI Ethics. A 16-years-old student said: "Using machine learning to play *Rock, Paper, Scissor* game.

Definitions and Conceptual Understanding

Answers about the presented concepts were varied. Some demonstrated an understanding, while others still had doubts. Regarding AI, highlights include: "A set of technologies that allow computers to perform advanced functions" (18-years-old student), and "It is good but can be harmful if used excessively" (17-years-old student). Regarding NLP, students wrote: "It's a way for technology to understand, interpret, and communicate in a more human-like manner" (17-years-old), and "It combines computational linguistics, machine learning, and deep learning models" (18-years-old). Finally, on ML, some comments were: "A way that allows computers to learn and improve autonomously" (18-years-old), and "A branch of AI that learns patterns from data" (18-years-old).

Reflections on Ethics in AI

By the end of the class, 33.3% of the students said they started reflecting more about the risks of AI, while 53.3% (Figure 6) already had this perception and maintained their opinion.
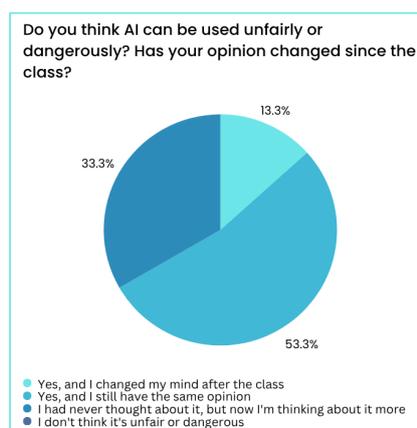

Figure 6: Perception of risks and opinion regarding AI changed after the class.

Class Impact

The majority of students stated that the activity was important to them. In Figure 7a, 73.3% said it was "very important", and the remaining 26.7% said it was "important". In addition, after the class, 66.7% said they were "interested" or "very interested" in continuing to study areas related to AI (Figure 7b).
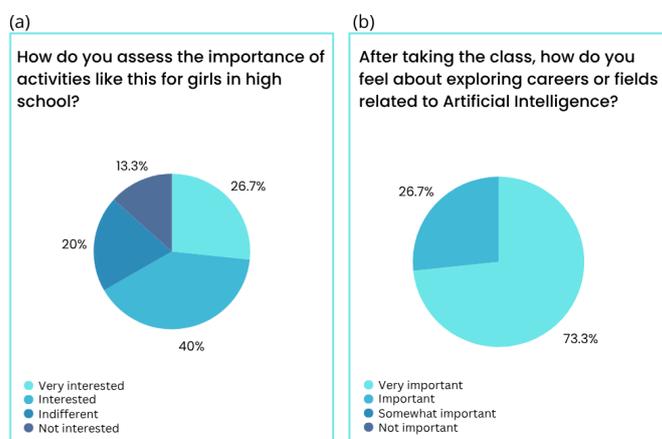

Figure 7: Perceived importance of the activity (a) and interest in pursuing careers in AI (b).

6. Discussion

The developed teaching content was essential to achieving the objectives of the project. The theoretical class was structured in slides with accessible language and visually appealing design, using graphic elements inspired by pixelated games and super-heroines (Figure 1), which helped to generate greater engagement among the students. The content introduced fundamental AI concepts, with a focus on ML and NLP, connecting these topics to practical everyday examples. The hands-on part was carried on using the Machine Learning for Kids and Scratch platforms, which allowed students to apply the acquired knowledge by building an interactive project. This combination of theory and practice, with materials adapted to the high school level, proved effective in both the understanding of the topics and in stimulating the participants' interest in AI.

From the initial questionnaire (Table 1), applied before the class, we were able to gather important information about the students' knowledge and perceptions of AI. Most of them (93.3%) had already heard of AI, and 86.7% reported having interacted with chatbots, indicating an initial familiarity with the technology. However, 93.4% of the students were unfamiliar with or did not know about NLP, and 60% had no knowledge of the term ML. The interest in learning more about AI was evident, with the majority of the students saying they wanted to understand how it works, how it is used, and how to create with it. In addition, students' concerns focused on ethical and safety issues, the inappropriate use of AI in schools, and problems such as deepfakes.

From the final questionnaire (Table 2), we obtained an overview of the students' understanding of the topics, their interest in deepening their knowledge of AI, and the impact of the class. About 73.3% of the students said they understood the topics well or completely. Interest in continuing to learn about AI was mentioned by 46.7% of students, while another 46.7% demonstrated more cautious interest. Regarding familiarity with chatbots, 33.3% of the participants stated they understood the concept well, while 66.7% considered their understanding more superficial. Concerning careers in the AI field, 66.7% of the students expressed interest or strong interest. The importance of activities like this was widely acknowledged, and 100% of the participants considered it "important" or "very important". Furthermore, 86.6% reflected on the ethical risks and issues involved in AI, stressing previously expressed concerns. Suggestions for future topics included areas such as robotics, ML, and how AI works.

The results obtained after applying the teaching content in the classroom showed that the project

fulfilled its role of arousing interest and broadening students' understanding of the main AI concepts. Although many had already come into contact with AI-based technologies, such as chatbots, most showed little familiarity with technical concepts such as ML and NLP prior to the class. After the activity, more than 70% of the students stated they understood the content well, which reinforces the potential of well-structured educational actions to make complex topics more accessible.

This impact is even more relevant when contextualized within the broader goal of the Meninas.comp project, which is to promote greater participation of girls in a field historically marked by low female representation. The fact that 66.7% of the participants showed interest in careers related to AI, and 100% recognized the importance of the project, demonstrates that initiatives like this not only expand access to technological knowledge but also serve as tools for empowerment. In addition, the ethical reflections raised during the lesson suggest the emergence of critical engagement, which is fundamental for building a more inclusive and diverse technology.

An important distinguishing feature of the project is its high potential for replicability, thanks to the methodological choice of using free and accessible tools. The platforms Machine Learning for Kids and Scratch 3, used in the practical activity, are web-based, require no paid licenses, and run on simple computers. The teaching material, developed on the Canva platform, is also free and widely accessible. This low-cost approach allows schools with limited resources to adopt the proposal, making the workshop model both feasible and scalable. The material is publicly available on the Meninas.comp project website[7], facilitating its adoption by educators in other regions.

Our project, like others in the literature, seeks to make AI accessible and relevant to high school girls. As Freitas et al. [9] emphasize, we aimed for a practical and interactive approach to increase participants' interest, using attractive visual resources and activities with accessible platforms. Alvarez et al. [10] and Andrade et al. [11] also highlight the importance of connecting content to the students' everyday lives, which we tried to reflect by discussing real-world applications of AI during the class. The inquiry-based learning approach proposed by Andrade et al. [13] and the STEM focus align with our intent to promote critical and interdisciplinary engagement. In contrast to Bressler [12], who emphasizes the need for advanced infrastructure, our project prioritized free and accessible tools, allowing for replication in low-resource contexts. Finally, as Webber et al. [14] suggest, adapting content to students' prior knowledge proved fundamental to the success of the activity.

7. Conclusions

The Meninas.comp project is an initiative aimed at introducing AI concepts to high school girls, with the aim of arousing their interest and encouraging them to pursue a professional career in computing. AI is one of the most transformative areas of contemporary science and technology, with a growing impact on the job market, industry, and everyday life. Introducing young students to these concepts not only broadens their understanding of emerging technologies but also prepares them for the future, equipping them with the skills needed to thrive in an increasingly digital world. Furthermore, the project plays a fundamental role in reducing the gender gap in computer science, a field historically marked by low female representation in STEM. By providing an inclusive and welcoming environment for learning AI, the initiative helps dismantle gender stereotypes, strengthens students' confidence in their technical abilities, and encourages them to consider careers in computing. Ultimately, projects like this not only benefit the students directly involved, but also generate a positive impact on the broader community, promoting a more inclusive view of science and technology.

For future work, we plan to adapt the lessons based on the observed class difficulties and participants' feedback, improving the teaching approach used. Additionally, we aim to advance the content covered, exploring more complex and current topics in the AI field. Another goal is to develop more complete and accessible teaching materials that can be independently used by teachers and students in schools, without relying on the continuous presence of members of the Meninas.comp project to lead the workshops.

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[7]https://www.meninas.cic.unb.br

An important next step is to expand the project to schools in different regions, broadening its reach to a more diverse audience. Furthermore, we plan to follow up with the participants over time to investigate whether the experience has influenced their academic and professional choices, especially in computing and STEM fields. The continuation of this initiative aims to serve as an inspiring and replicable model for other educational actions focused on increasing women's inclusion in computer science in Latin America. With this, we hope to build a solid path for more girls to feel represented, empowered, and become protagonists in the development of future technologies.

Declaration on Generative AI

AI is used to translate texts and reformulate sentences and improve clarity.

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