



## "Mujer Aumentada" (*Augmented Woman*): Promoting Participation in Augmented Reality through Learning and Innovation

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**Abstract.** "*Mujer Aumentada*" is an initiative that seeks to encourage the creation of augmented reality experiences, through the use of frameworks, to promote learning, creativity, and innovation. The initiative has emerged as a response to the decrease in attention span and intellectual quotient of society, which has been shown to be related to the excessive use of new digital media. The goal of "*Mujer Aumentada*" is to promote the inclusion of more women in leadership roles in the technology field, considering that less than 20% of women hold leadership roles in these areas currently.

**Keywords:** Technology, Augmented Reality, XR Learning, Innovation, XR Women.

### 1 Introduction

Extended reality technology, such as augmented reality, has been one of the most disruptive emerging technologies in recent years. However, there is still a large number of people who are unaware of the possibilities offered by this technology in Latin America, especially women and young people. This document presents the *Mujer Aumentada* initiative, which aims to encourage the interest of people in the creation of services and/or products through technologies related to extended realities.

#### 1.1 Origins and Objectives

The *Mujer Aumentada* initiative was created by Karina Acuña, co-founder of Shift Active and XR creator, aiming to promote interest in the creation of products and services in the field of extended realities. The main objective of this initiative is to encourage women and young people to get involved in creating content and businesses related to extended realities.

The initiative was launched at the first Women in Games event, which took place in Barranquilla, Colombia in 2020, and was attended by women from various profiles, such as influencers, political communicators, user experience designers, gamers, audiovisual professionals, and developers, who showed great interest in the video game and XR sectors.



**Fig. 1.** Launch of the *Mujer Aumentada* initiative at the first Women in Games event in Barranquilla, Colombia.

## 1.2 Creative Tools and Tips

The *Mujer Aumentada* initiative seeks to promote women and young people's familiarity with augmented reality technology through the provision of entrepreneurship tools and creative tips. It offers different resources such as Master Classes to learn how to create the first AR filters, content creation tips, time management workshops directed to creative people, and leadership principles for technology-based businesses.

## 1.3 Conducted Survey- Results and Analysis

In Bogota, Colombia, *Mujer Aumentada* conducted a survey to evaluate the experience of people and their understanding in the use of augmented reality filters [5]. Of the 41 surveyed individuals, 30% were women. One of the findings was that 40% of respondents do not use augmented reality filters due to a lack of knowledge about their usage, while 54% rarely use them on social media. In addition, 36% of respondents consider these filters to be a fun and entertaining tool to experiment with technology, and 55% prefer the more popular filters, which are the fun and animated ones. At a MetaDay event in March 2023, in Bogota, Colombia, it was revealed that only 1% of users on Instagram and Facebook use augmented reality filters in the content they publish. In conclusion, these findings suggest that while there is interest in augmented reality, it is crucial to educate users on how to use it and demonstrate its practical value for widespread adoption.

## 2 The Decline of Attention Span in the Digital Era: An Opportunity for Augmented Reality

Microsoft's study, in response to the question "Do you think digital is killing our attention span?" [2] revealed a decrease in people's average attention span from 12 seconds in the year 2000 to only 8 seconds after a decade and a half. The Flynn effect indicated an increase in IQ in the past, but now a decline has been demonstrated.

One possible cause of this decline is the lack of learning and excessive distraction that new digital media can cause, as pointed out by a study from Stanford University [4]. As a result, *Mujer Aumentada* seeks to encourage the creation of augmented reality experiences, through the use of frameworks to promote learning, creativity, and innovation.

## 3 The Role of *Mujer Aumentada* in promoting extended realities

### 3.1 Augmented Reality Filters in Spark AR

Augmented reality filters in Spark AR are an accessible and fun tool that has allowed *Mujer Aumentada* to introduce many people to extended reality technologies. This development framework allows people from different areas of knowledge, without robust programming skills, to create augmented reality filters and experiment with content creation, promoting creativity.

Furthermore, augmented reality is an excellent way to introduce young people and women to the concept of the metaverse, as it allows them to experiment with immersive technologies and discover the possibilities of creating and sharing content in a virtual space. Although the metaverse is still in its early development phase and

there are challenges such as a lack of standardization and connectivity [3], augmented reality offers a preview of the potential of these technologies and allows more people to feel comfortable and familiar with them.

Bringing people closer to extended reality technology is essential to foster creativity, innovation, and entrepreneurship. This will not only allow more people to access these technologies, but it will also contribute to reducing the gender gap [1] in the technology sector.

## 4 Conclusions and Recommendations

In conclusion, the *Mujer Aumentada* initiative is a promising project that seeks to promote the inclusion and participation of women in the world of technology and innovation through augmented reality. It is focused on learning, as well as collaborating, training women for leadership and decision-making, which are key elements to achieve greater diversity and equity in the technological sector. The initiative has the potential to make a significant difference in the industry by opening up new opportunities for women and young people, and encouraging innovation in key areas. Overall, it can be said that this initiative is a positive example of how technology and innovation can be used to address important social challenges and achieve a positive impact on society.

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