

# *Insegnare STEAM con la didattica digitale e la realtà aumentata*

Grzegorz Karwasz

*Lezione 7: Realtà aumentata, digitale, reale  
Parte I Dalla «realtà» virtuale alla realtà aumentata*

# Ricordiamo che cos'è la realtà aumentata

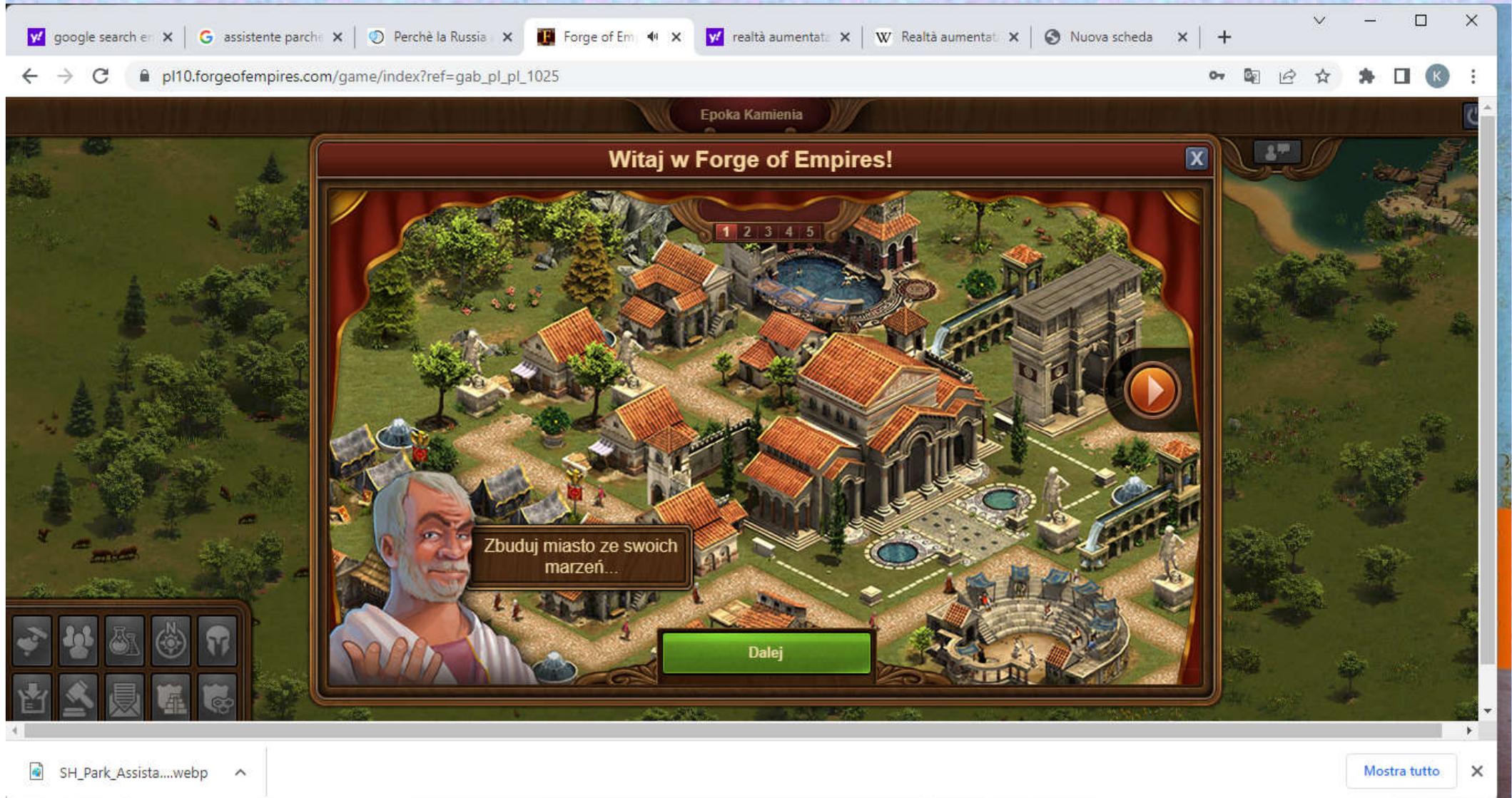
Per **realtà aumentata** (abbreviato **RA** o **AR** dall'inglese *augmented reality*), o **realtà mediata dall'elaboratore**, si intende l'arricchimento della percezione sensoriale umana mediante informazioni, in genere manipolate e convogliate elettronicamente, che non sarebbero percepibili con i cinque sensi.<sup>[1]</sup>

Il cruscotto dell'automobile, l'esplorazione della città puntando lo smartphone o la chirurgia robotica a distanza sono tutti esempi di realtà aumentata.

VR simulates an environment and AR brings information to your real world environment

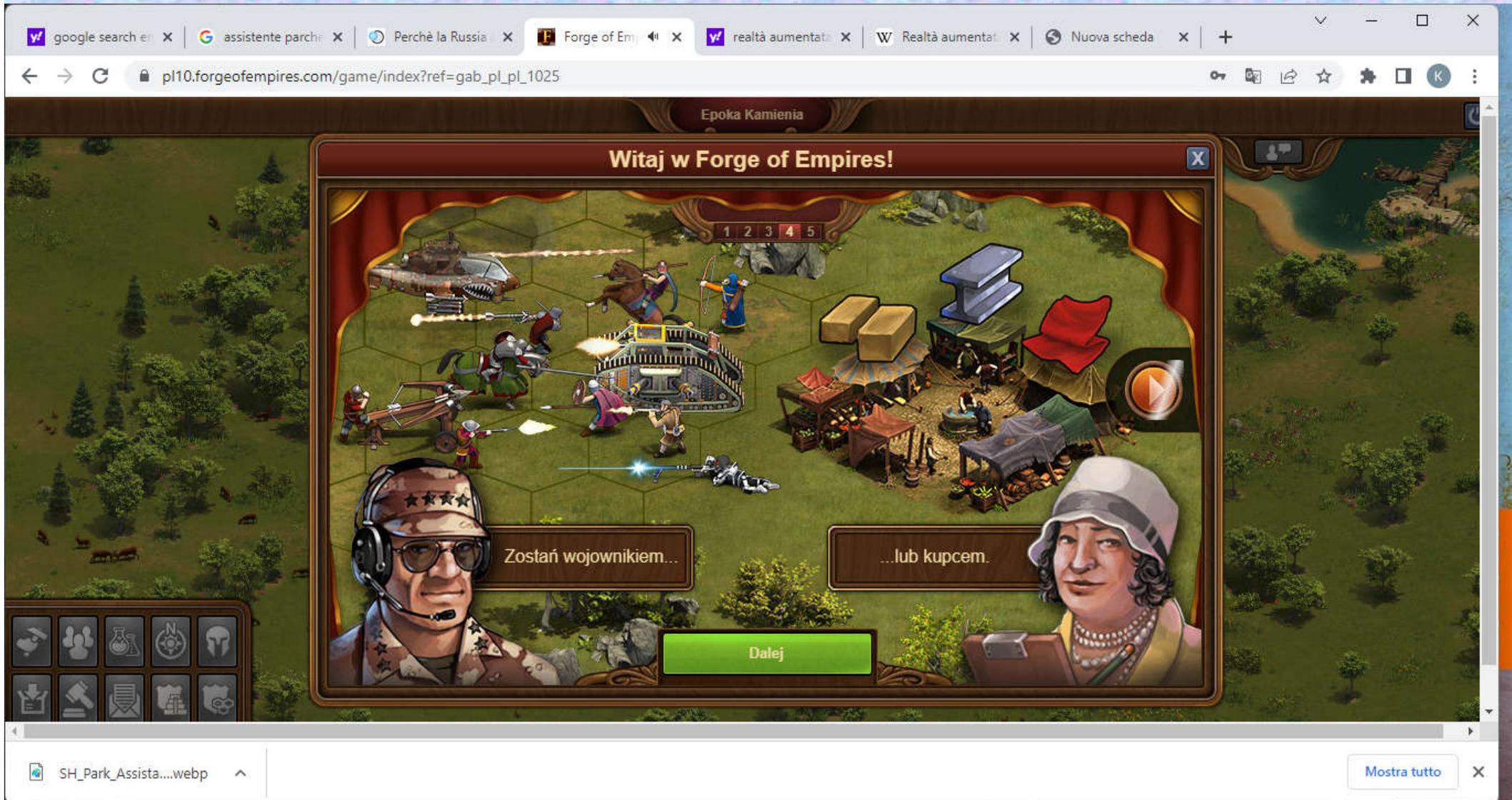
# Il mondo virtuale di ragazzi

Voglia di costruire (almeno sullo schermo virtuale)



# Il mondo virtuale di ragazzi

Un ruolo / responsabilità individuale assegnata



# Il mondo virtuale di ragazzi

Un gruppo di collaborazione (gilda)



SH\_Park\_Assista...webp

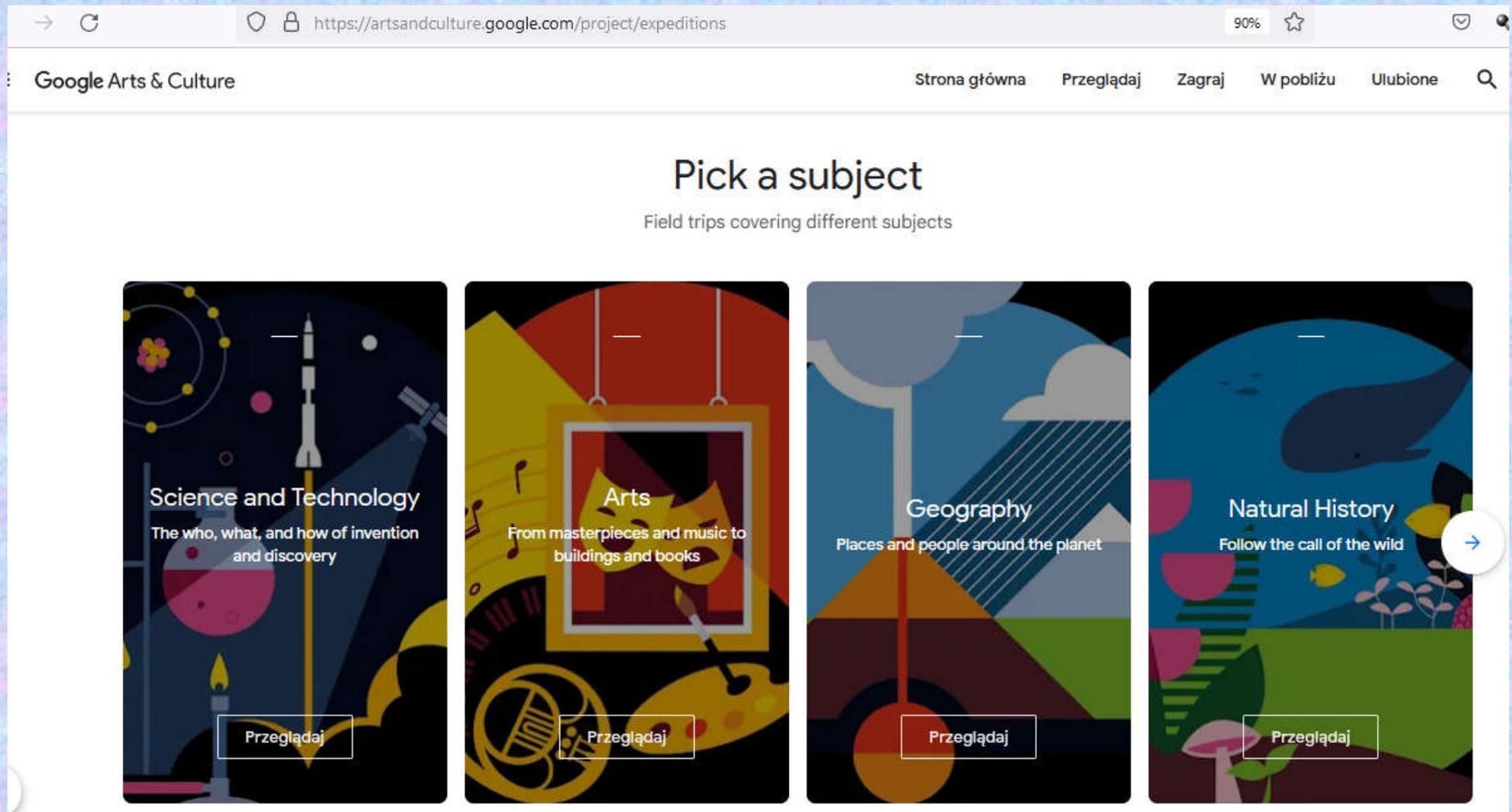
Mostra tutto

12°C  
Nuvoloso



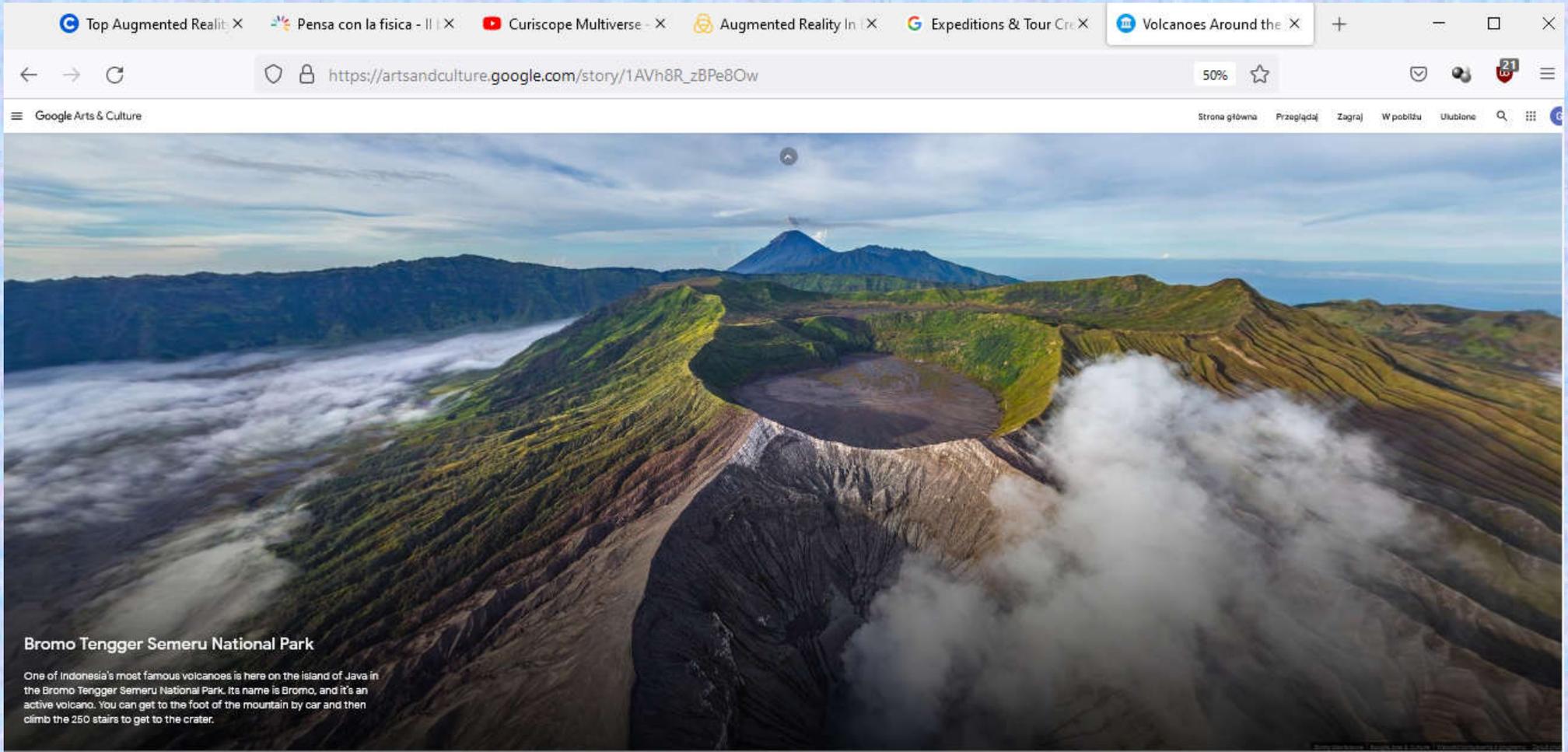
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# Google per educazione



<https://artsandculture.google.com/project/expeditions>

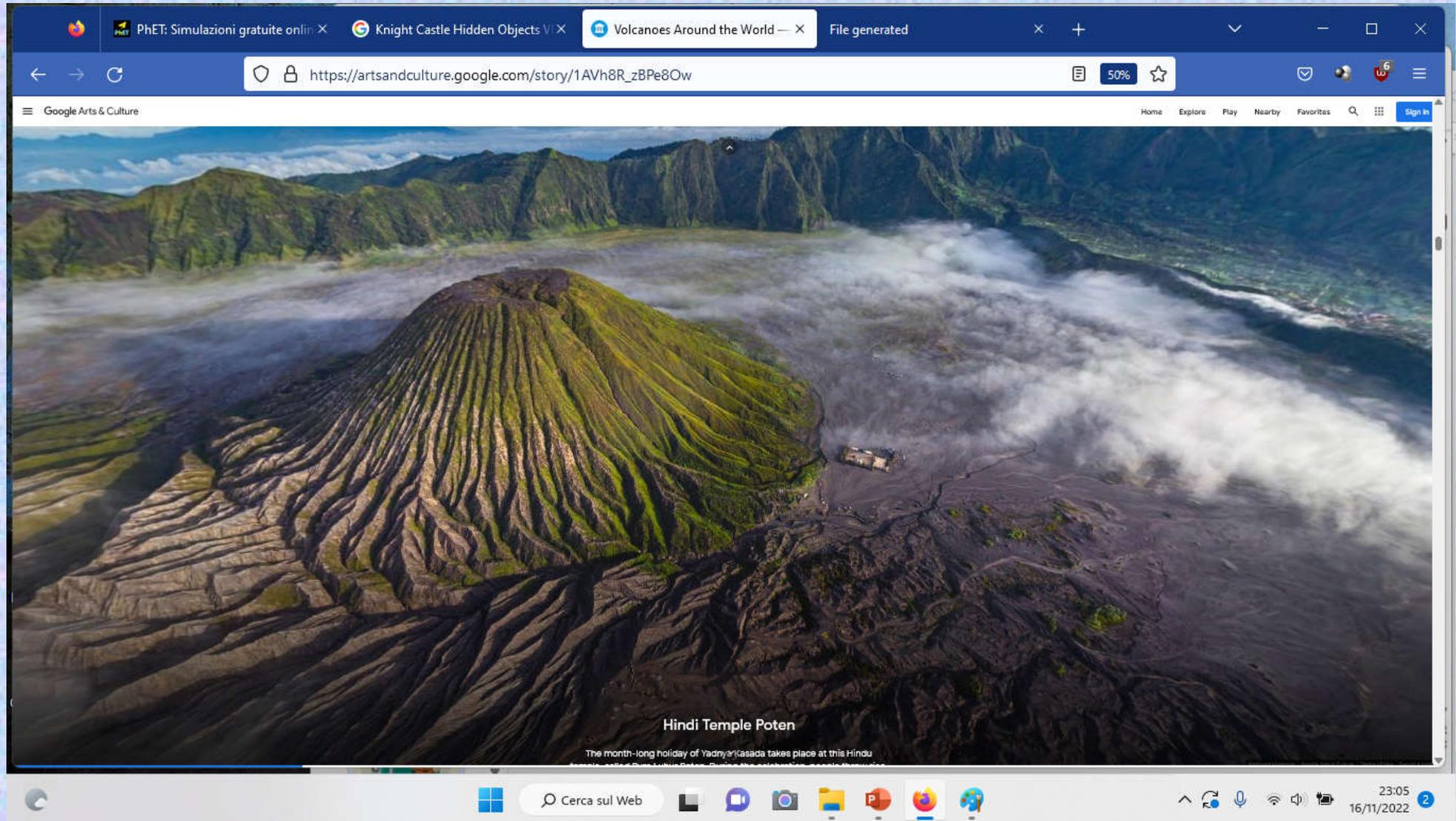
# Arte, science, geografia, natural history



## Vulcani attorno il mondo

[https://artsandculture.google.com/story/1AVh8R\\_zBPe8Ow](https://artsandculture.google.com/story/1AVh8R_zBPe8Ow)

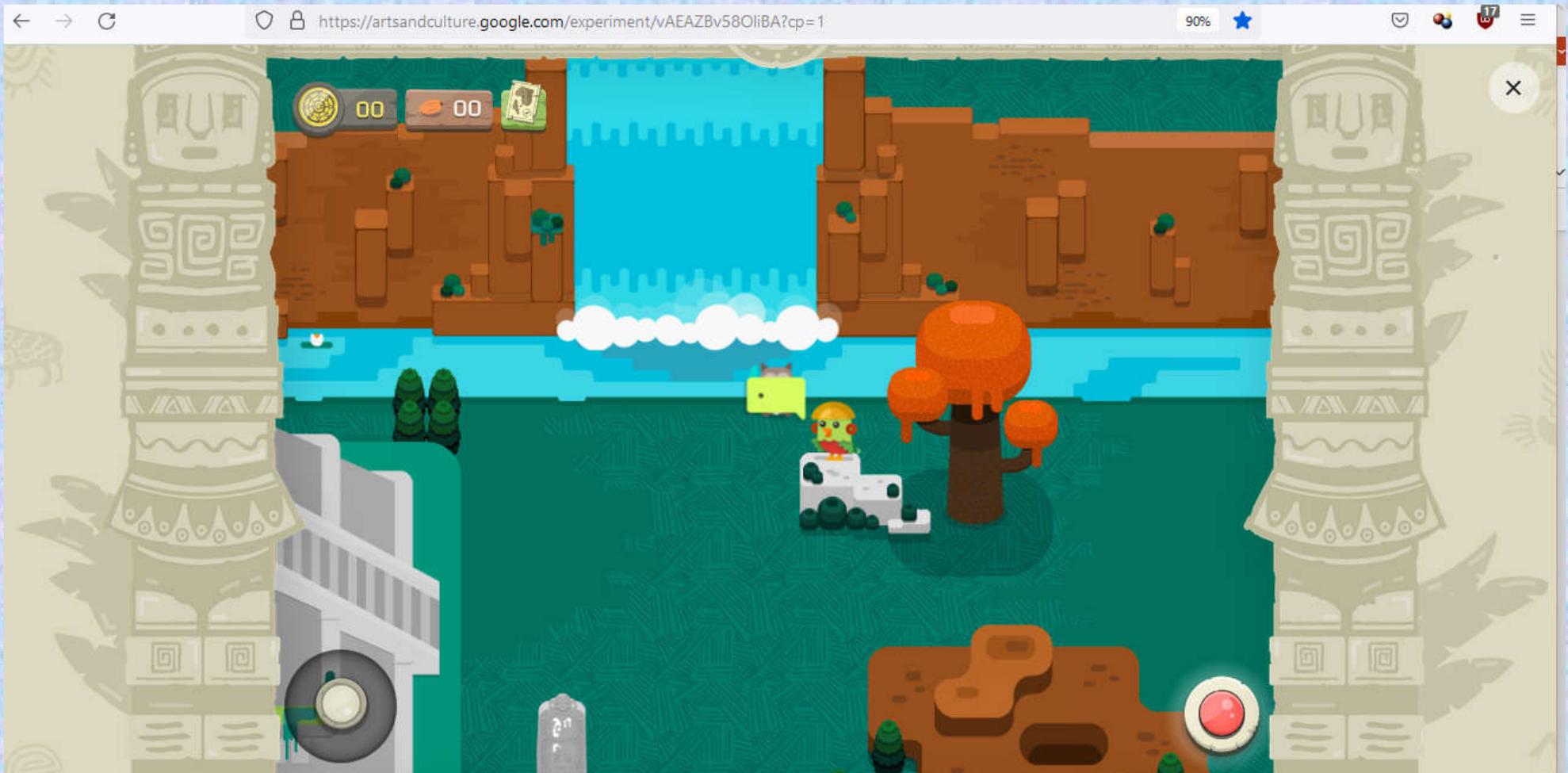
# Arte, science, geografia, natural history



## Vulcani attorno il mondo

[https://artsandculture.google.com/story/1AVh8R\\_zBPe8Ow](https://artsandculture.google.com/story/1AVh8R_zBPe8Ow)

# Gioco educativo (Google)



**La discesa dello serpente**

<https://artsandculture.google.com/experiment/vAEAZBv58OliBA?cp=1>

# Realtà virtuale vs. realtà aumentata

Tornando all'argomento, come si possono caratterizzare le due tecnologie?

**La realtà virtuale (VR)** consente all'utente di muoversi in un ambiente illusorio e **completamente digitalizzato** e di avere limitate opportunità di movimento intorno a questo spazio immaginario. Ciò è possibile grazie all'uso di attrezzature speciali dotate di sensori e telecamere in grado di riprodurre il modo e la direzione del movimento dell'utente.

La realtà aumentata (AR), a sua volta, è una tecnologia che utilizza anche attrezzature specializzate e, con il suo aiuto, integra la realtà circostante con elementi aggiuntivi. L'apparecchiatura utilizzata dall'AR (di solito occhiali o un [dispositivo mobile](#)) viene utilizzata per imporre ulteriori immagini o informazioni sulla realtà che ci circonda.

«Realtà» virtuale potrebbe essere del tutto immaginaria  
Realtà aumentata corrisponde al mondo reale, e lo arricchisce  
con tecnologie virtuali

# Vantaggi della didattica virtuale

- Coinvolge la percezione motoria e sensoriale – la cognizione è indiretta ma vicina alla cognizione diretta, cioè con gli oggetti reali
- Imparare attraverso le emozioni, esperienza in contatto diretto con gli oggetti
- Possibilità di usare le nozioni acquisite in precedenza per risolvere problemi nuovi
- Conoscenze interdisciplinari e complesse
- Abilità d'interpretare le nozioni, confrontare diverse soluzioni dello stesso problema
- Acquisizione delle capacità e la possibilità di confronto delle nozioni con la pratica
- Acquisizione delle nozioni attraverso relazioni sociali e relazioni al programma

# Vantaggi della didattica virtuale (cont.)

- Visione olistica di oggetti e loro parti
- La doppia codifica – verbale e visiva
- La possibilità di fissazione – posizionando oggetti vicino al loro ambiente
- Approccio individuale nello svolgimento di compiti
- La velocità propria individuale del lavoro
- L'abilità di vedere elementi chiave della attività svolta
- La concentrazione di attenzione e alto livello di motivazione

# Corsi on-line

Top Augmented Reality Course X Introduction to Augmented Reality X

← → ↻ 🔒 https://www.coursera.org/learn/ar?courseSlug=ar&showOnboardingModal=check

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Grzegorz Karwasz ▾

Browse > Computer Science > Mobile and Web Development

## Introduction to Augmented Reality and ARCore

★★★★★ 4.5 3,366 ratings | 👍 96%

Google AR & VR

**Go To Course**

Already enrolled  
Financial aid available

73,917 already enrolled

Offered By



16°C  
Parzial, sereno



14:09  
06/09/2022

<https://www.coursera.org/>

# Corsi on-line

The screenshot shows a web browser window with three tabs: 'Top Augmented Reality Course...', 'Introduction | Coursera PLAYING', and 'Introduction to Augmented Rea...'. The address bar shows the URL 'https://www.coursera.org/learn/ar/lecture/3zJrX/introduction'. The Coursera logo is on the left, and a search bar with the text 'Search in course' and a 'Search' button is in the center. On the right, there is a notification bell and a user profile for 'Grzegorz Karwasz'. Below the navigation bar, the breadcrumb trail reads 'Introduction to Augmented Re... > Week 1 > Introduction', with a 'Next >' link. The main content area is titled 'Welcome to the course!' and includes a 'Video: Introduction' (51 sec) and a 'Transcript' section. The transcript is in English and starts with '0:00 Welcome to the introduction to augmented reality in AR core class. This course is for AR newcomers, and people who are looking to understand more about augmented reality. Over the next couple of weeks, you'll gain familiarity with the core concepts involved in the creation of AR content specifically through Google's AR core platform. No previous experience or coding knowledge is required to successfully complete this course. Although, a basic understanding of AR/VR technologies is a plus. By the end of this class, you'll have an understanding of augmented reality, know how smartphone based AR works, and, have familiarity with AR core, Google's augmented reality platform for smartphones. Are you ready to get started? Let's dive in.' Below the transcript are icons for 'Like', 'Dislike', 'Report an issue', and 'Share'. On the right side of the page, there is a video player showing a woman in a pink top speaking. At the bottom of the browser window, the Windows taskbar is visible, showing the system tray with a temperature of 16°C, the date 06/09/2022, and the time 14:16.

Top Augmented Reality Course: X Introduction | Coursera PLAYING Introduction to Augmented Rea X +

Search in course Search

Grzegorz Karwasz

Introduction to Augmented Re... > Week 1 > Introduction Next >

Welcome to the course!

Video: Introduction 51 sec

What is AR?

Types of AR experiences

Transcript

English Help Us Translate

0:00 Welcome to the introduction to augmented reality in AR core class. This course is for AR newcomers, and people who are looking to understand more about augmented reality. Over the next couple of weeks, you'll gain familiarity with the core concepts involved in the creation of AR content specifically through Google's AR core platform. No previous experience or coding knowledge is required to successfully complete this course. Although, a basic understanding of AR/VR technologies is a plus. By the end of this class, you'll have an understanding of augmented reality, know how smartphone based AR works, and, have familiarity with AR core, Google's augmented reality platform for smartphones. Are you ready to get started? Let's dive in.

Like Dislike Report an issue Share

16°C Parzial, sereno 14:16 06/09/2022

<https://www.coursera.org/>

# Gli arbori

Il termine realtà aumentata è stato coniato per la prima volta nel 1992 da Thomas Caudell e David Mizell, due ingegneri di Boeing che lavoravano su un semplice visore trasparente che aiutava gli ingegneri aeronautici in complessi schemi di cablaggio. Secondo la loro documentazione, l'obiettivo della realtà aumentata, comunemente abbreviata in AR, era quello di consentire riduzioni dei costi e miglioramenti dell'efficienza in molte delle operazioni umane coinvolte nella produzione di aeromobili.

Abbiamo sognato il potenziale dell'AR per molto tempo e la storia del mezzo risale a prima ancora che avessimo un termine per questo. In effetti, l'AR condivide una storia con il suo cugino tecnologico, la realtà virtuale. Sia la realtà virtuale che la realtà virtuale che l'AR condividono un antenato comune, la Spada di Damocle. Costruita nel 1968, la Spada di Damocle è stata creata da uno scienziato informatico e ricercatore, Ivan Sutherland. Il suo obiettivo era quello di creare il display definitivo: un'interfaccia digitale capace di trasformare il mondo fisico. Il prototipo era così pesante che doveva essere sospeso al soffitto da un braccio meccanico.

Il display definitivo sarebbe una stanza all'interno della quale il computer può controllare l'esistenza della materia. Una sedia esposta in una stanza del genere sarebbe abbastanza buona per sedersi. Le manette esposte in una stanza del genere sarebbero confinanti, e un proiettile esposto in una stanza del genere sarebbe fatale. Con una programmazione appropriata un tale display potrebbe letteralmente essere il Paese delle Meraviglie in cui Alice camminava.

Oggi non abbiamo più bisogno di bracci meccanici per sospendere macchine pesanti dal soffitto. Le cuffie, esponenzialmente più potenti della spada di Damocle del 1968, possono essere indossate sui nostri volti come occhiali o stare comodamente nelle nostre tasche. L'hardware che si indossa indipendentemente sulla testa come occhiali, visiera o casco, viene definito auricolare autonomo o display montato sulla testa, HMD in breve. Tuttavia, la maggior parte delle persone accederà all'AR per la prima volta con dispositivi che probabilmente usi ogni giorno, il tuo smartphone

Diamo un'occhiata all'AR auricolare e all'AR mobile in modo più dettagliato. Questi sono attualmente i due principali sistemi di distribuzione per i contenuti AR. Sul lato AR delle cuffie, all'inizio del 2018, l'HMD più utilizzato è Microsoft HoloLens. È completamente wireless e ha un design simile a una visiera. Funziona con una batteria ricaricabile e il 100% della sua potenza di elaborazione si trova all'interno del suo telaio. Sempre sul lato AR mobile, questo è il modo in cui la maggior parte del mondo sperimenterà la realtà aumentata per la prima volta.

In effetti, il rapido sviluppo degli smartphone ha effettivamente contribuito alla crescita delle industrie VR e AR. Questo perché gli stessi componenti che fanno funzionare gli smartphone, giroscopi, accelerometri, display miniaturizzati ad alta risoluzione, sono necessari anche per le cuffie AR e VR.

# Componenti di smartfon

Top Augmented Reality Course: X AR today: smartphone vs. stand... PLAYING Introduction to Augmented Rea... X +

https://www.coursera.org/learn/ar/lecture/y3wH3/ar-today-smartphone-vs-standalone

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Grzegorz Karwasz

Introduction to Augmented Re... > Week 1 > AR today: smartphone vs. standalone

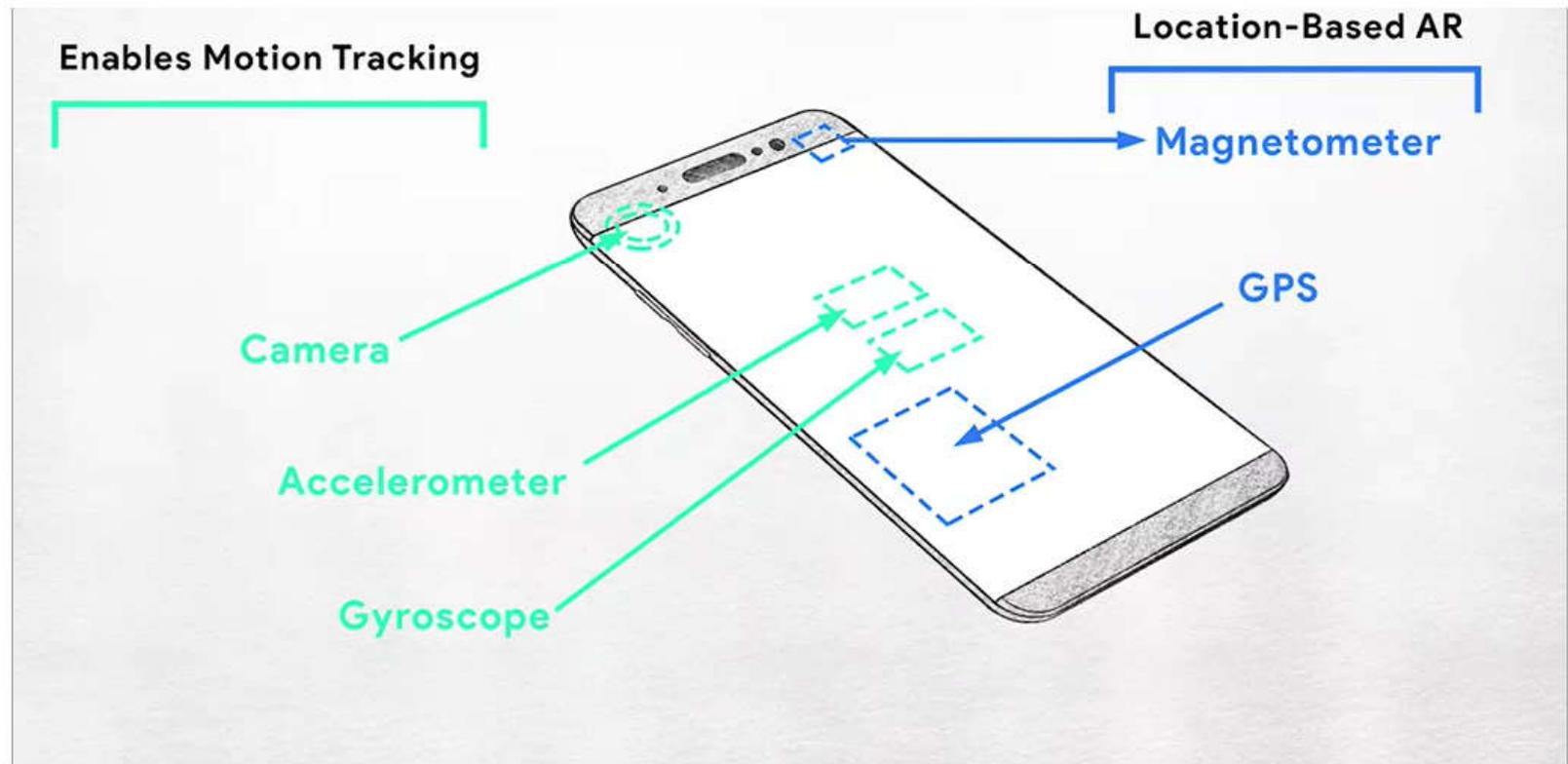
< Previous Next >

Welcome to the course!

What is AR?

- ▶ **Video:** The history of augmented reality  
2 min
- ▶ **Video:** AR today: smartphone vs. standalone  
1 min
- ▶ **Video:** Google AR  
1 min
- ▣ **Reading:** The similarities and differences between AR and VR  
20 min
- ▣ **Reading:** Learning checkpoint - the basics of augmented reality  
20 min

Types of AR experiences



# Smartphones & AR

Top Augmented Reality Courses X AR today: smartphone vs. stand X +

← → ↻ 🔒 https://www.coursera.org/learn/ar/lecture/y3wH3/ar-today-smartphone-vs-standalone ☆

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Introduction to Augmented Re... > Week 1 > AR today: smartphone vs. standalone

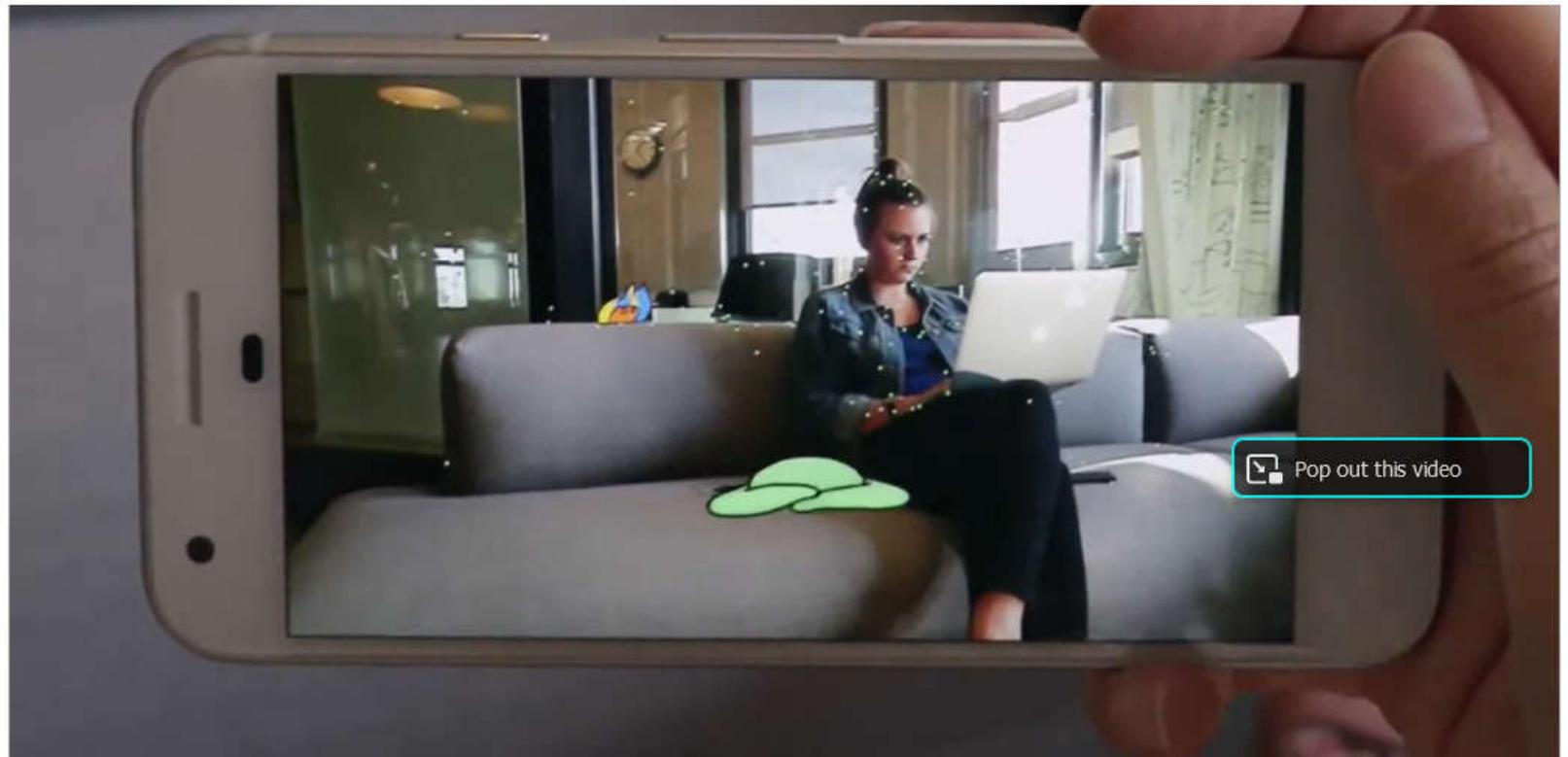
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20 min

### Types of AR experiences



17°C  
Soleggiato



17:05  
06/09/2022 5

# Smartphones & AR

«Di nuovo sul lato AR mobile.

È così che la maggior parte del mondo sperimenterà la realtà aumentata per la prima volta. In effetti, il rapido sviluppo degli smartphone ha effettivamente contribuito alla crescita delle industrie VR e AR.

Questo perché gli stessi componenti che fanno funzionare gli smartphone; Giroscopi, accelerometri, display miniaturizzati ad alta risoluzione sono necessari anche per AR e Cuffie VR.

L'elevata domanda di smartphone ha guidato la produzione di massa di questi componenti negli ultimi 10 anni con conseguenti maggiori innovazioni hardware e diminuzioni nei costi.

E il senso più elementare, l'AR viene creata utilizzando le fotocamere anteriori e posteriori del tuo telefono. Lo tieni sollevato e il tuo schermo è in grado di visualizzare oggetti digitali e informazioni integrate nel tuo mondo reale.

Il tuo telefono può ora fungere da portale per nuovi mondi, esperienze e informazioni.»

# Smartphones & AR

Top Augmented Reality Course: X AR today: smartphone vs. stand X +



https://www.coursera.org/learn/ar/lecture/y3wH3/ar-today-smartphone-vs-standalone



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Grzegorz Karwasz

Introduction to Augmented Re... > Week 1 > AR today: smartphone vs. standalone

< Previous Next >

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20 min
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20 min

### Types of AR experiences



# AR in shopping

The image is a screenshot of a web browser displaying a Coursera lecture page. The browser's address bar shows the URL: <https://www.coursera.org/learn/ar/lecture/D7UJR/ar-for-shopping-and-retail>. The Coursera logo is visible in the top left, and the user's name, Grzegorz Karwasz, is in the top right. The page content includes a navigation breadcrumb: Introduction to Augmented Re... > Week 1 > AR for shopping and retail. On the left, there is a sidebar with the heading 'Welcome to the course!' and a list of video topics under 'Types of AR experiences':

- Video: AR for shopping and retail (1 min)
- Video: AR for business (34 sec)
- Video: AR for social media (45 sec)
- Video: AR for gaming (1 min)
- Video: AR for education (56 sec)
- Video: AR for healthcare (57 sec)
- Video: AR for nonprofits (38 sec)
- Discussion Prompt: Looking to

The main content area features a large video player. The video shows a man with glasses and a light blue shirt sitting at a desk, speaking. To his left, a smartphone screen displays an AR application interface. The screen shows a 3D model of a white cabinet and a white sofa in a virtual environment. The phone's interface includes a green circular button at the bottom center and icons for 'Use' and 'Add' at the bottom corners. The Windows taskbar is visible at the bottom of the screenshot, showing the time as 17:15 on 06/09/2022 and the temperature as 17°C in Soleggiato.

<https://www.coursera.org/learn/ar/lecture/D7UJR/ar-for-shopping-and-retail>

# AR in games

Top Augmented Reality Course: X AR for gaming | Coursera X +

← → ↻ 🔒 https://www.coursera.org/learn/ar/lecture/MRtP5/ar-for-gaming ☆

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🔔 Grzegorz Karwasz ▾

Introduction to Augmented Re... > Week 1 > AR for gaming

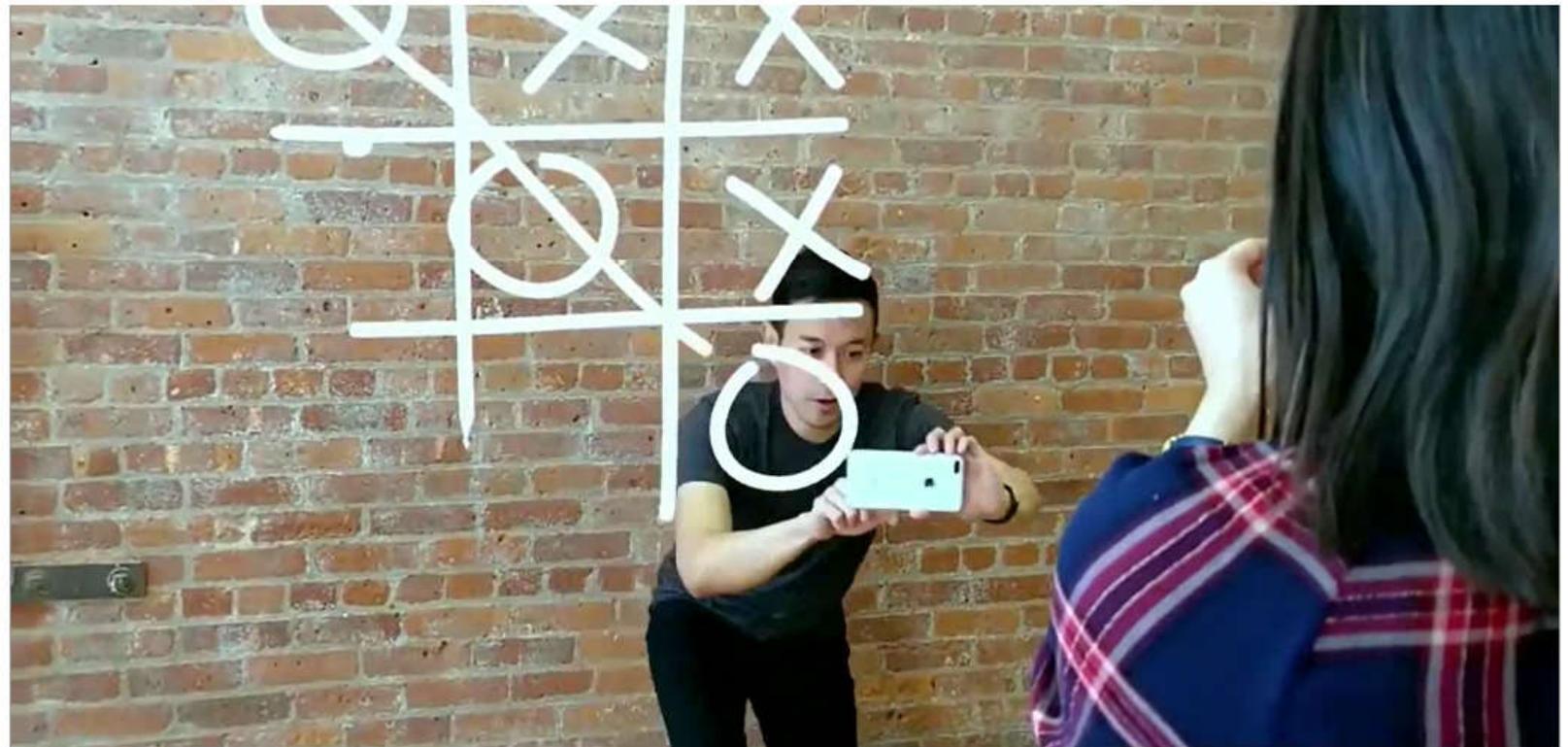
< Previous Next >

Welcome to the course!

What is AR?

Types of AR experiences

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56 sec
- ▶ Video: AR for healthcare  
57 sec
- ▶ Video: AR for nonprofits  
38 sec
- 🗨 Discussion Prompt: Looking to



# AR in games

The screenshot shows a web browser window displaying a Coursera course page. The browser tabs include 'Top Augmented Reality Course' and 'AR for gaming | Coursera'. The address bar shows the URL: <https://www.coursera.org/learn/ar/lecture/MRtP5/ar-for-gaming>. The Coursera logo and a search bar are visible at the top. The course navigation shows 'Introduction to Augmented Re...' > 'Week 1' > 'AR for gaming'. On the right, there are 'Previous' and 'Next' navigation buttons. The user's name 'Grzegorz Karwasz' is displayed in the top right corner.

**Welcome to the course!**

**What is AR?**

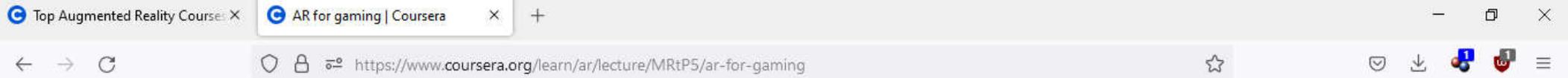
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57 sec
- ▶ **Video: AR for nonprofits**  
38 sec
- 🗨 **Discussion Prompt: Looking to**

The main content area features a large image of a smartphone displaying an AR application. The application shows a 3D scene with various colorful objects like mushrooms, flowers, and a house, overlaid on a real-world background of a room. The text 'WOORLD Funomena' is visible at the bottom of the screen. A 'MENU' button is in the top right corner of the app interface. The Windows taskbar at the bottom shows the system tray with a temperature of 17°C, the name 'Soleggiato', and the date and time '06/09/2022 17:22'.

World Funomena

# AR in games



**coursera**

Search in course

Search



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Introduction to Augmented Re... > Week 1 > AR for gaming

< Previous Next >

Welcome to the course!

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57 sec
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38 sec
- ▶ **Discussion Prompt:** Looking to



17°C  
Soleggiato



17:21  
06/09/2022

# AR in educazione

- Dimostrare argomenti complessi è un'altra delle maggiori capacità di AR, che consente agli studenti di interagire con contenuti spaziali visualizzati proprio di fronte a loro. A tal fine, Google ha lanciato un'applicazione AR per l'istruzione. Expeditions AR è un'esperienza educativa progettata per aiutare gli insegnanti a mostrare informazioni agli studenti con immagini AR semplici e coinvolgenti.
- Ad esempio, gli studenti possono esplorare un filo di DNA, ispezionare la statua di David o addirittura assistere a un intenso uragano di categoria cinque. L'apprendimento spaziale consente agli studenti di interagire direttamente con i contenuti 3D, piuttosto che doverli immaginare mentre leggono un libro di testo.
- Google Expeditions AR è un'esperienza didattica progettata per aiutare gli insegnanti a mostrare le informazioni degli studenti con la realtà aumentata.
- E l'istruzione è anche una categoria più ampia rispetto alla classe. AR ci permetterà di creare ambienti di formazione in cui possiamo misurare e incorporare le informazioni in tempo reale.

# AR in educazione

The screenshot shows a web browser window displaying a Coursera course page. The browser tabs include 'Top Augmented Reality Course...' and 'AR for education | Coursera'. The address bar shows the URL 'https://www.coursera.org/learn/ar/lecture/SUNs8/ar-for-education'. The Coursera logo and a search bar are visible at the top. The course title is 'Introduction to Augmented Re...' and the current section is 'Week 1 > AR for education'. On the left, a list of video lessons is shown, with 'Video: AR for education' (56 sec) highlighted. The main content area features a large image of a smartphone displaying an AR application. The phone screen shows a 3D model of a person's torso with a circular icon on the right side. The background of the phone screen is a blurred classroom setting. At the bottom of the screenshot, a Windows taskbar is visible, showing the system tray with the date '06/09/2022' and time '17:29', and the taskbar with icons for Windows, Search, File Explorer, Camera, Google Chrome, Firefox, and Microsoft Word.

Top Augmented Reality Course: X AR for education | Coursera X +

← → ↻ 🔒 https://www.coursera.org/learn/ar/lecture/SUNs8/ar-for-education ☆

coursera Search in course Search

Grzegorz Karwasz

Introduction to Augmented Re... > Week 1 > AR for education < Previous Next >

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17°C Soleggiato

06/09/2022 17:29

Un tornado in classe

# AR in educazione

The screenshot shows a web browser window displaying a Coursera course page. The browser tabs include 'Top Augmented Reality Course...' and 'AR for education | Coursera'. The address bar shows the URL 'https://www.coursera.org/learn/ar/lecture/SUNs8/ar-for-education'. The Coursera logo and a search bar are visible at the top. The course title is 'Introduction to Augmented Re...' and the current section is 'Week 1 > AR for education'. On the left, a list of video lessons is shown, with 'Video: AR for education' (56 sec) highlighted. The main content area features a large image of a smartphone on a tripod displaying an AR application of a volcano in a classroom setting. The Windows taskbar at the bottom shows the date '06/09/2022' and time '17:27'.

Top Augmented Reality Course: X AR for education | Coursera X +

← → ↻ 🔒 https://www.coursera.org/learn/ar/lecture/SUNs8/ar-for-education ☆

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Introduction to Augmented Re... > Week 1 > AR for education < Previous Next >

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Un vulcano in classe

# AR in educazione

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Top Augmented Reality Course: X AR for education | Coursera X +

← → ↻ https://www.coursera.org/learn/ar/lecture/SUNs8/ar-for-education ☆

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Introduction to Augmented Re... > Week 1 > AR for education < Previous Next >

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- ▶ **Video:** AR for nonprofits  
38 sec
- 🗨 **Discussion Prompt:** Looking to

17°C Soleggiato

17:31 06/09/2022

Radiografia in tempo reale della mummia (o del amico)

# AR in social media

The screenshot shows a web browser window displaying a Coursera course page. The browser's address bar shows the URL: <https://www.coursera.org/learn/ar/lecture/VG9rU/ar-for-social-media>. The Coursera logo is visible in the top left, and a search bar is in the top center. The user's name, Grzegorz Karwasz, is in the top right. The course navigation shows 'Introduction to Augmented Re...' > 'Week 1' > 'AR for social media'. On the left, a list of video lessons is shown, with 'Video: AR for social media' (45 sec) selected. The main content area features a video player with a 3D burger character and a man speaking. The Windows taskbar at the bottom shows the date as 06/09/2022 and the time as 17:33.

Top Augmented Reality Course: X AR for social media | Coursera PLAYING

Search in course Search

Grzegorz Karwasz

Introduction to Augmented Re... > Week 1 > AR for social media

Previous Next

Welcome to the course!

What is AR?

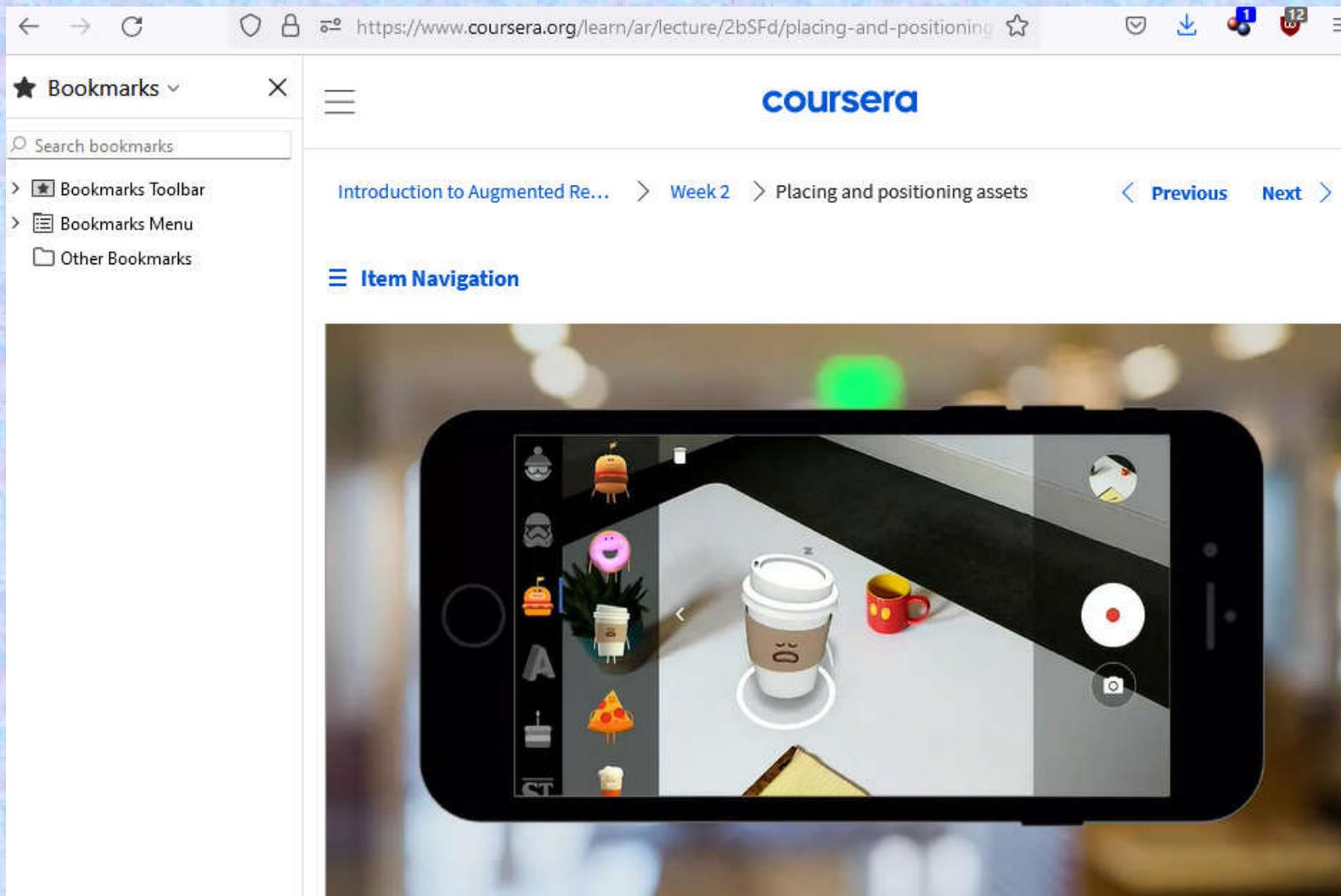
Types of AR experiences

- Video: AR for shopping and retail 1 min
- Video: AR for business 34 sec
- Video: AR for social media 45 sec**
- Video: AR for gaming 1 min
- Video: AR for education 56 sec
- Video: AR for healthcare 57 sec
- Video: AR for nonprofits 38 sec
- Discussion Prompt: Looking to

17°C Soleggiato 17:33 06/09/2022

«Stickers» by Google

# I requisiti per gli oggetti AR



Oggetti virtuali devono comportarsi come oggetti reali

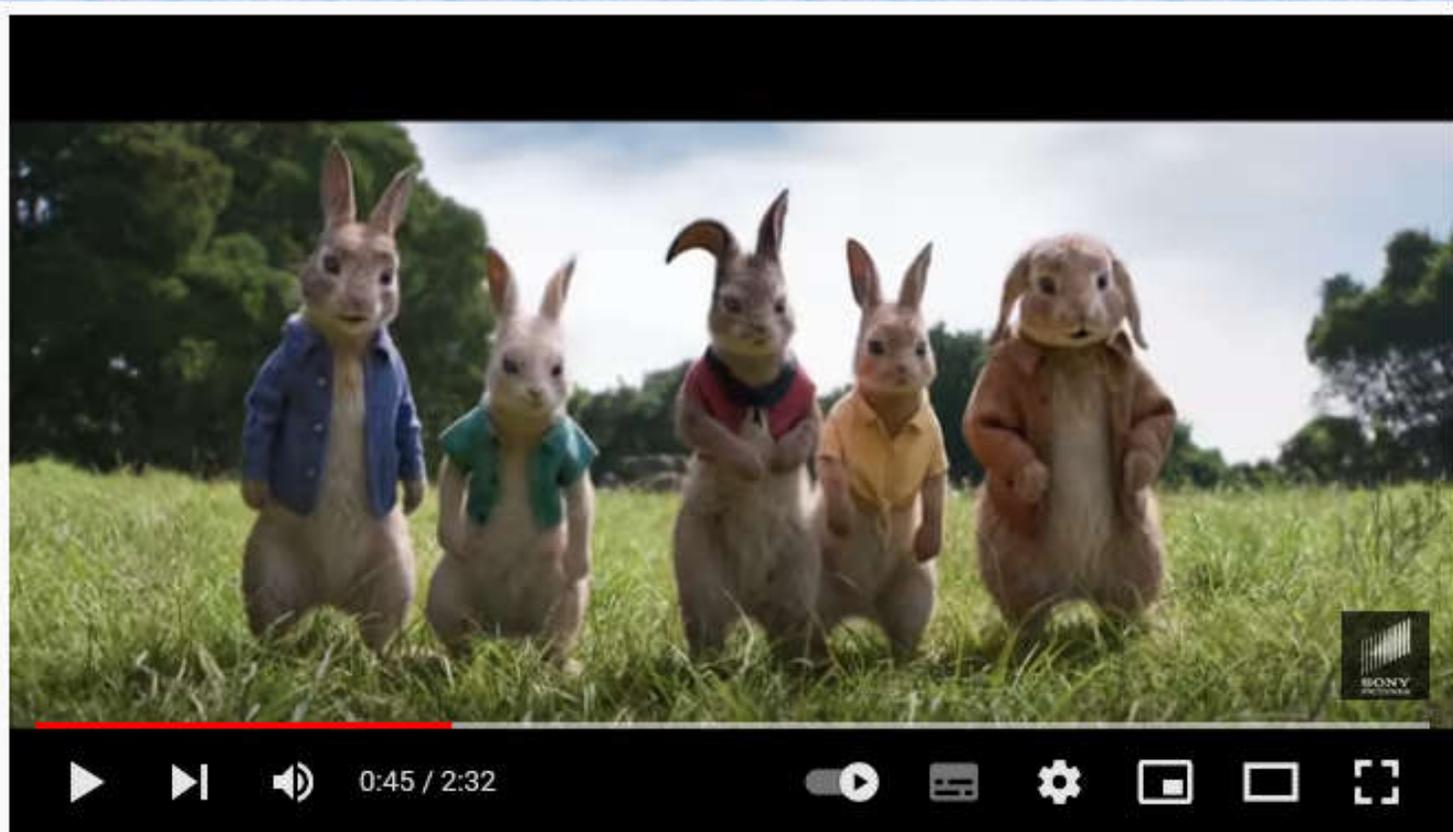
# I requisiti per gli oggetti AR



Bisogna rispettare la prospettiva, illuminazione, mutua occlusione etc.  
D'altra parte, tutte queste tecniche sono state già sviluppate per i cartoni «animati»

<https://www.coursera.org/learn/ar/lecture/eouJd/lighting-for-increased-realism> 0'i9uhubhj bn

# Gli oggetti virtuali nel mondo reale: Peter Rabbit



#PeterRabbit2 #OfficialTrailer #Sony

**PETER RABBIT 2: THE RUNAWAY - Official Trailer (HD)**

Bisogna rispettare la prospettiva, illuminazione, mutua occlusione etc.  
D'altra parte, tutte queste tecniche sono state già sviluppate per i cartoni «animati»

<https://www.youtube.com/watch?v=euGHcnyUo84>

# L'esempio migliore: Robocop (1987)

The screenshot shows a web browser window with the YouTube website. The main video player displays the official trailer for Robocop (1987), featuring the titular character in a futuristic police uniform. The video progress bar indicates it is at 0:56 out of 1:42. Below the video, the title "Robocop (1987) | Official Trailer | MGM Studios" is visible, along with the MGM logo and a "Nie podoba mi" button. To the right of the video player, there is a list of recommended videos, including "Robocop 3", "Maurizio Pollini - Piano Recital (1976.3.9 Tokyo, Tokyo Bunka...)", "Maurizio Pollini - Piano Recital (2002.6.25 Paris, Cité de la...)", "Robocop Epic Final Scene", and "Robocop (2014)". The browser's address bar shows the URL "https://www.youtube.com/watch?v=lqvRDhW-XVA". The Windows taskbar at the bottom shows the system tray with a temperature of 19°C, the date 07/09/2022, and the time 16:36.

Le istruzioni vigenti sulla visiera

# Una sovrapposizione del mondo reale

Top Augmented Reality Course: X | Lighting for increased realism | X | Robocop (1987) | Official Trailer X

https://www.youtube.com/watch?v=lqvRDhW-XVA

Szukaj

YouTube PL

PRIME DIRECTIVES

- 1: SERVE THE PUBLIC TRUST
- 2: PROTECT THE INNOCENT
- 3: UPHOLD THE LAW

Odtwórz (k)

1:04 / 1:42

#MGM #Robocop

Robocop (1987) | Official Trailer | MGM Studios

Wszystkie Podobne Obejrzone

**Robocop 3**  
Filmy YouTube  
Sensacja i przygoda • 1993 • Język  
[Kup lub wypożycz](#)  
1:44:50

**Maurizio Pollini - Piano Recital (1976.3.9 Tokyo, Tokyo Bunka...**  
Jun Kumazawa  
3,2 tys. wyświetleń • 8 miesięcy temu  
1:29:19

**Maurizio Pollini - Piano Recital (2002.6.25 Paris, Cité de la...**  
Jun Kumazawa  
41 tys. wyświetleń • 2 lata temu  
1:35:38

**Robocop Epic Final Scene**  
TheGTAMaster001  
6,9 mln wyświetleń • 12 lat temu  
2:08

**Robocop (2014)**  
Filmy YouTube  
Sensacja i przygoda • 2014 • Język  
[Kup](#)  
1:57:31

19°C Soleggiato

Nie podoba mi

16:31 07/09/2022

Le istruzioni vigenti sulla visiera

# L'esempio migliore

The screenshot shows a web browser window with the YouTube website. The main video player displays the 'Robocop (1987) | Official Trailer | MGM Studios'. The video content features a thermal vision overlay, with the word 'THERMOGRAPH' visible in green text at the top. The video player includes a progress bar at 1:11 / 1:42 and various control icons. Below the video, there are social media links for #MGM and #Robocop, and a 'Nie podoba mi' button. The right sidebar shows a list of recommended videos, including 'Robocop 3', 'Maurizio Pollini - Piano Recital (1976.3.9 Tokyo, Tokyo Bunka...)', 'Maurizio Pollini - Piano Recital (2002.6.25 Paris, Cité de la...)', 'Robocop Epic Final Scene', and 'Robocop (2014)'. The Windows taskbar at the bottom shows the system tray with a temperature of 19°C, the date 07/09/2022, and the time 16:33.

Sensi aggiunti (camera all'infrarosso)

# AR per divertimento

Top Augmented Reality Course x Top 11 Fun Augmented Reality x +

https://invisible.toys/augmented-reality-for-fun/

**invisible toys**

AR DEVELOPMENT VR DEVELOPMENT PORTFOLIO ABOUT US BLOG CONTACT **I WANT AR / VR APP**

**List of Best Augmented Reality for Fun**

01.07.2020 8750

10°C Nuvoloso

11/09/2022 19:39

<https://invisible.toys/augmented-reality-for-fun/>

# AR per divertimento

The screenshot shows a web browser window with two tabs: 'Top Augmented Reality Course' and 'Top 11 Fun Augmented Reality'. The address bar shows the URL 'https://invisible.toys/augmented-reality-for-fun/'. The page content includes a section titled 'What are the benefits of Fun Augmented Reality?' with a paragraph explaining that AR toys offer visualization and interactivity, turning boring activities into adventures. Below this is another section 'What can Augmented Reality be used for?' with a list of applications. On the right side, there is a blue banner that says 'I WANT AR/VR APP' and a circular badge that reads 'FEATURED ON MOBILE APP DAILY TOP AUGMENTED REALITY DEVELOPMENT COMPANIES 2019'. The Windows taskbar is visible at the bottom, showing the date as 11/09/2022 and the time as 19:42.

Top Augmented Reality Course x Top 11 Fun Augmented Reality x +

← → ↻ <https://invisible.toys/augmented-reality-for-fun/> 120% ☆

## What are the benefits of Fun Augmented Reality?

The key to fun: **Augmented Reality toys** offer great visualization and interactivity experiences. They turn any boring activity into an engaging adventure. AR apps make it possible for people to learn something new AND have fun. They are always available – only a tap on your smartphone brings you to another world. No one ever needs to be idle ever again: keep busy having fun and learning while waiting for someone or something.

AR apps make the invisible—visible! Words describe a picture: an image makes it real.

## What can Augmented Reality be used for?

Here is what everyone can do using an AR app and her/his smartphone:

- ✓ apply amusing photo effects
- ✓ play (mini-)games
- ✓ try new clothes or makeup without the need to put them on
- ✓ navigate through new locations
- ✓ create 3D paintings
- ✓ (re-)construct different objects

**Applicazioni per i-Phone**

I WANT AR/VR APP  
Education  
🕒 27.02.2018

FEATURED ON  
**MOBILE APP DAILY**  
TOP AUGMENTED  
REALITY DEVELOPMENT  
COMPANIES  
**2019**

10°C  
Nuvoloso

19:42  
11/09/2022

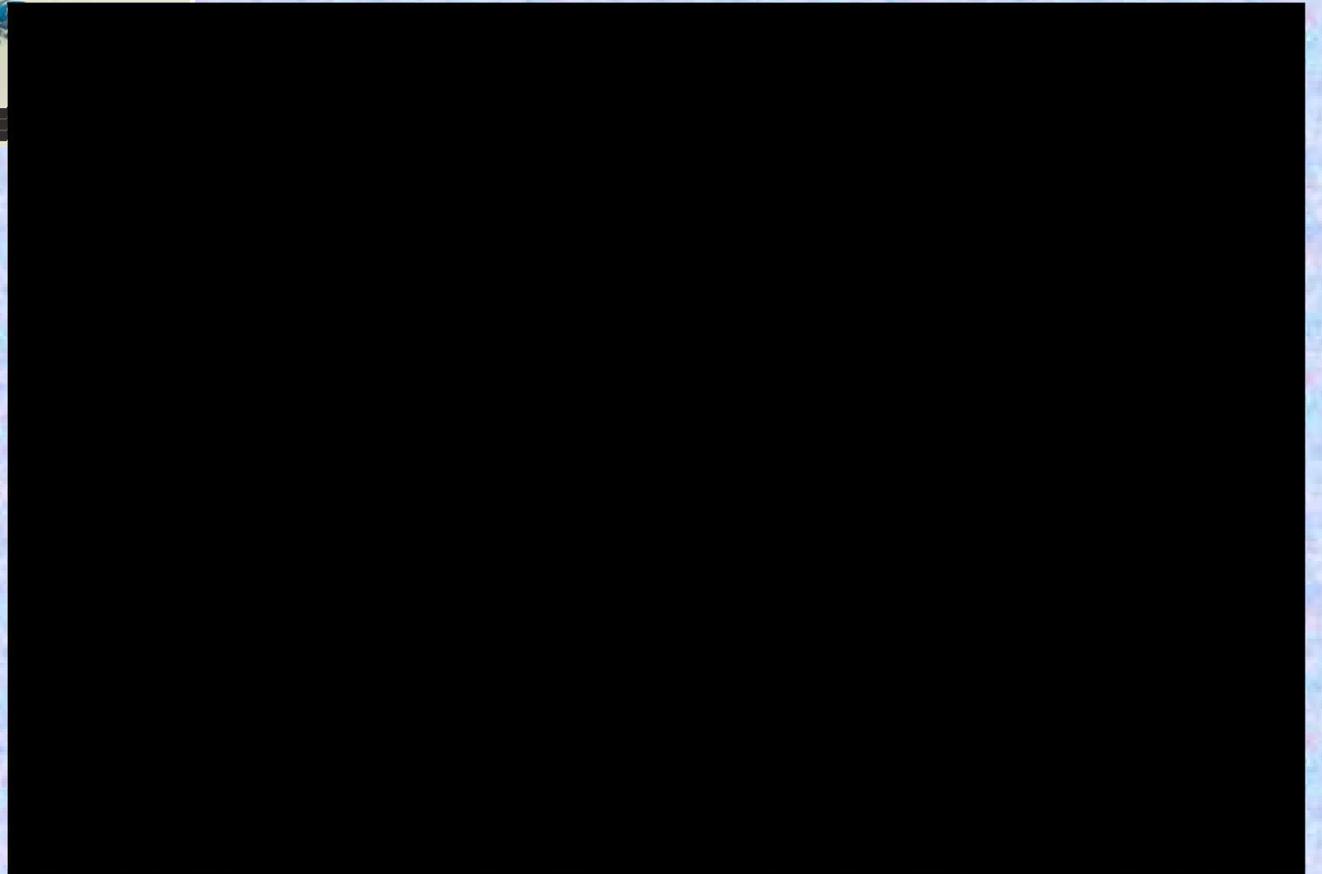
<https://invisible.toys/augmented-reality-for-fun/>

# AR per marketing McDonald

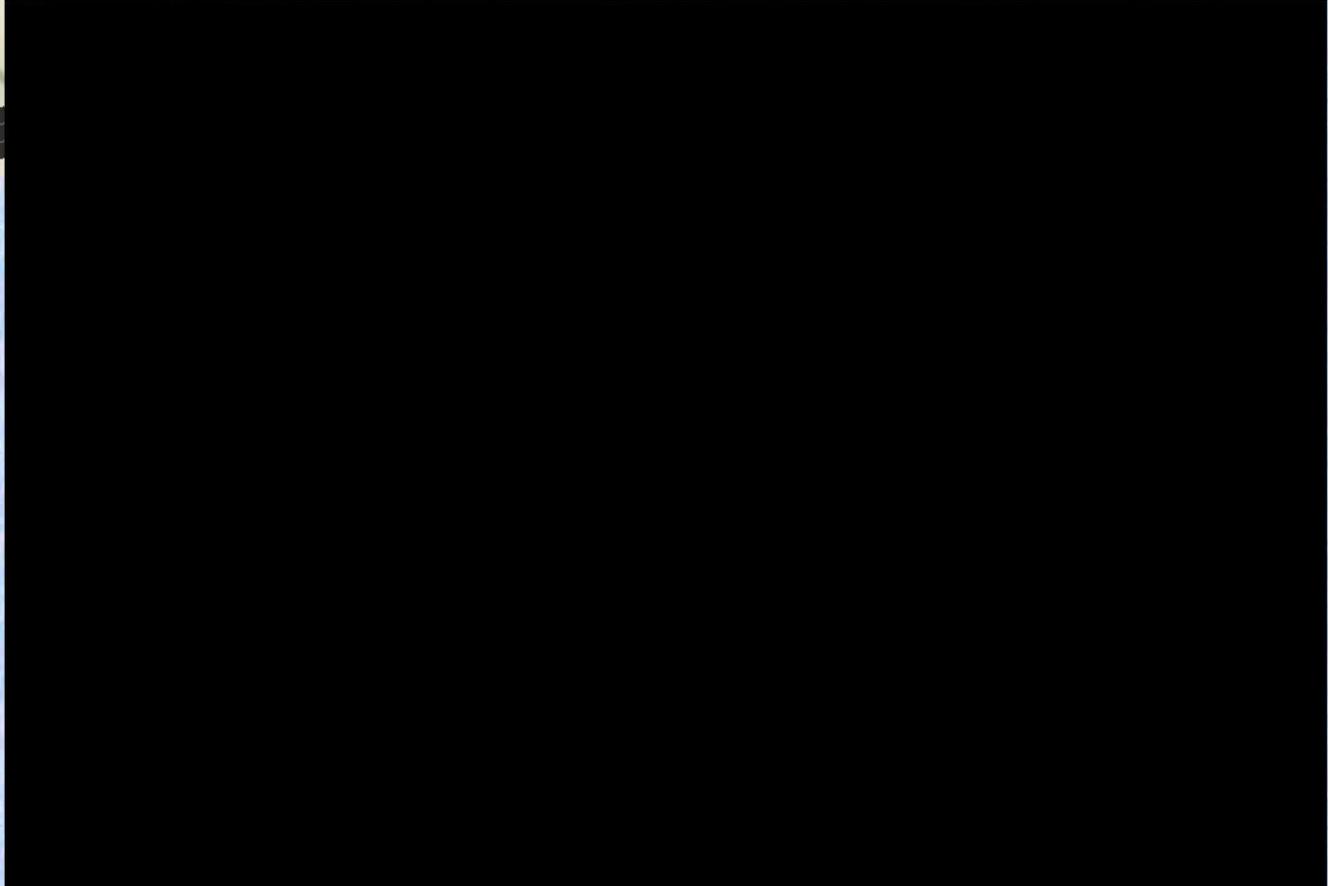


<https://www.behance.net/gallery/10600847/McDonalds-TrackMyMaccas>

# AR per marketing



# AR per marketing





# AR per marketing LEGO



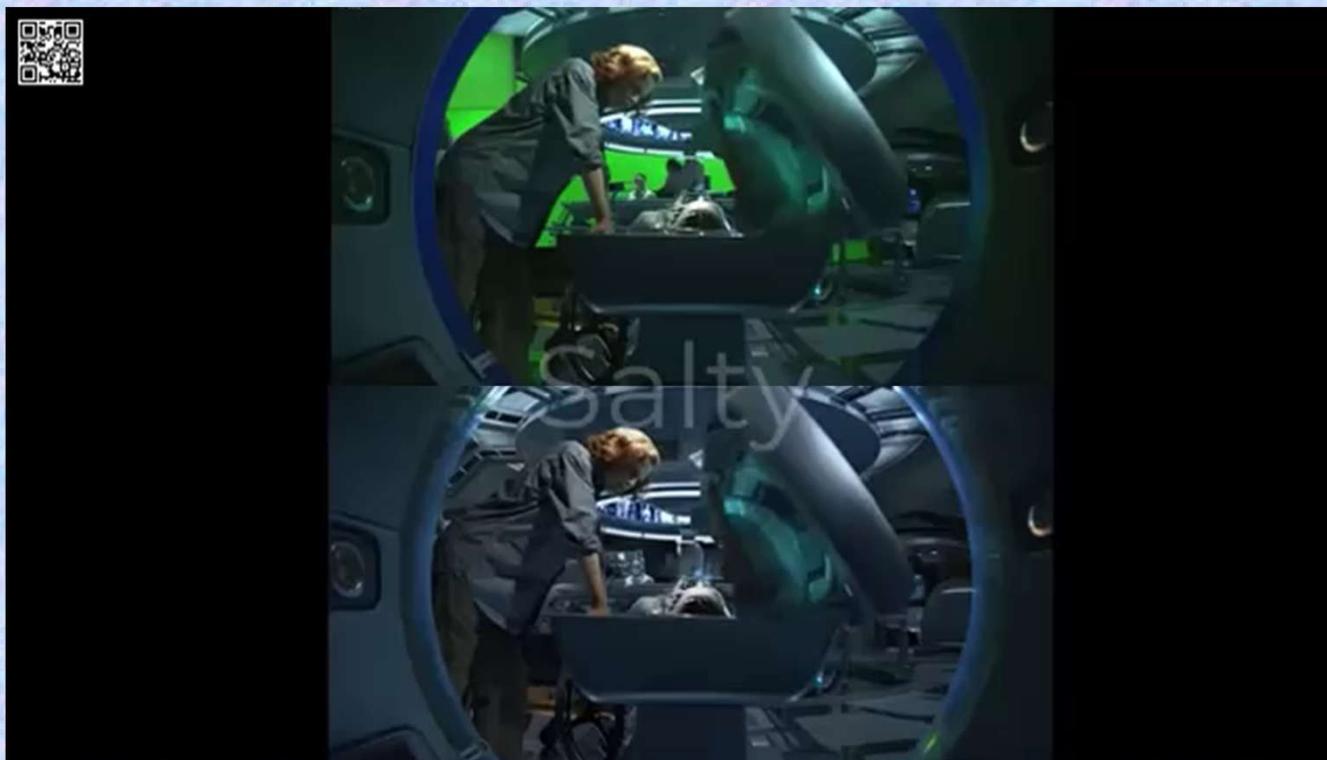
# «Avatar», James Cameron, 2009



Avatar sono copie reali, delle persone reali, che riproducono a distanza le azioni degli «originali»

**Avatara**<sup>[1]</sup> ([AFI: /ava'tara/](#); dal [sanskrito](#) अवतार, *avatāra*, *pronuncia sanscrita* : a volte adattato, sul modello di inglese e francese, come *avatar*, [/ava'tar/\[1\]\[2\]](#)), in numerose teologie [indù](#), è l'apparizione o la discesa sulla terra della divinità avente lo scopo di ristabilire o tutelare il [Dharma](#).

Tale termine è collegato al verbo *avatī* (di genere *parasamaipadam*, attivo, di 1<sup>a</sup> classe), con il significato di "discendere in" (accusativo o locativo) oppure "discendere da" (ablativo) ancora "arrivare a" (accusativo) o "essere al posto giusto", "essere adatto" e infine "incarnarsi" (nel caso di una divinità).



# McDonalds' Avatar

McDonald's made its most ambitious movie-tie in with the film Avatar, breaking new ground with virtual reality marketing. During the campaign, young people could log on to the McDonald's Avatar site and use their webcams to interact with a variety of augmented reality games.<sup>1</sup> The goal of the Avatar campaign was simple: to "promote its Big Mac to young adults and to entice kids to request more Happy Meals."<sup>2</sup> Buying Big Macs gave consumers a way to reach higher levels of game play, and codes placed inside Happy Meals gave children access to special features on the website.<sup>3</sup> The strategy worked: McDonald's saw an 18 percent increase in U.S. Big Mac sales as a result of its Avatar campaign.<sup>3</sup>

Working closely with Avatar's production team, McDonald's developed an immersive online experience built around Pandora, the mythical planet of Avatar, with exclusive features for McDonald's customers. [Source: "McDonald's Orders Up Augmented Reality From Total Immersion for Avatar Promotion," Computer Graphics World, 29 Dec. 2009, <http://www.cgw.com/Press-Center/Web-Exclusives/2009/McDonalds-Orders-Up-Augmented-Reality-From-Total.aspx> (viewed 4 Aug. 2010).]



# McDonalds' Avatar

McDonald's PandorROVR, a remote exploration vehicle that users could control online, enabled site visitors to explore the Pandora landscape, capturing and sharing images along the way. [Source: Dean Takahashi, "Multiverse's Remix Makes it Easy to Create Avatar Spinoff Games," GamesBeat, 17 Dec. 2009, <http://games.venturebeat.com/2009/12/17/multiverses-remix-makes-it-easy-to-create-avatar-spinoff-games/> (viewed 11 Aug. 2011).



# McDonalds' Avatar

An example of an image, captured on McDonald's PandoraQuest online game, that players could email to their friends. [Source: Multiverse, "Image Gallery," <http://www.multiverse.net/games/gallery.jsp?cid=2&scid=2> (viewed 11 Aug. 2011).]



# McDonalds' Avatar

Using 3D photo-morphing technology, the "Avatarize Yourself" feature allowed viewers to upload a head shot—or select one from Facebook—in order to transform it into a rendition of a personalized Na'vi (the inhabitants of Pandora). Social networks were soon flooded with images of Avatarized users and celebrities. [Source: Patricia Odell, "McDonald's Avatarize Yourself: 2010 IMA Winner," Promo Magazine, 30 Apr. 2010, <http://promomagazine.com/awards/ima-awards/mcdonalds-avatarize-yourself/> (viewed 11 Aug. 2011).]



# McDonalds' Avatar

"Thrill Cards" placed on the side of Big Mac packages. Any of eight different Thrill Cards triggered a web cam powered by the McD Vision software to transport a consumer to three immersive Pandora environments. [Source: Cosmin Ghiurau, "McDonalds and Avatar Augmented Reality by Total Immersion," 20 Dec. 2009, AugmentPro, <http://augmentpro.com/mcdonalds-and-avatar-augmented-reality-by-total-immersion/> (viewed 11 Aug. 2011).]





# McDonalds – Avatar AR

<http://www.jonellis.info/mcdonalds-happy-meal-train-dragon-ar-mobile-game/>



# Proseguire: Avatar chat

The screenshot shows a web browser window with the YouTube website. The address bar displays the URL <https://www.youtube.com/watch?v=lxwUFNAxGyo>. The page title is "Avatar The Way of Water LIVE Discussion w/ Discovering Pandora, Avatar Guy, & Sivako Podcast". The video player shows a live stream with four participants: "Drinking in Pandora 'Jay'", "Avatar guy", "SIVAKO ROAD TO AVATAR", and "Odtwórz (k)". The chat window on the right is active, showing a list of comments from viewers. The Windows taskbar at the bottom indicates the system time is 14:37 on 12/09/2022.

Top Augmented Reality Course: X | Avatar The Way of Water LIVE D | X | Errore 404 | File generated

← → ↻ 🔒 🌐 🗄️ 🔍 Szukaj 🔍 🔊 📧 🔔 188 🍷

YouTube PL

Drinking in Pandora "Jay" | Avatar guy

Odtwórz (k) | SIVAKO ROAD TO AVATAR | SUBSCRIBE

4:49 / 1:37:07 | Discovering Pandora

#avatarthewayofwater #avatar2 #pandora

**Avatar The Way of Water LIVE Discussion w/ Discovering Pandora, Avatar Guy, & Sivako Podcast**

Drinking in Pandora | 1,87 tys. subskrybentów | Wesprzyj | SUBSKRYBUJ

Ponowne odtwarzanie Topczatu ▾

- Alex Mearafina - movie's gonna be awesome
- clee Avatar guy!
- camiryat hi !!
- Eleonora Merafina Hello to everyone ❤️
- Marri Manga 🙌
- Ayakhula Mithethwa Hy avatar guy
- Patrick T Speak'Merican
- Natdu38 Avatar Guy I follow your channel, and I love your work
- Eleonora Merafina The best avatar podcast team ever ...
- Marri Manga How are you guys
- i hi
- Sivako: Road to Avatar - AvatarPod 🗣️ @Eleonora Merafina you are too kind ❤️
- Anamnesis Kaltxi!
- RotoCommish Smash that 👍 button and spread the word.
- Natdu38 oel ngati kameve

14°C | Nuvoloso | 14:37 | 12/09/2022

<https://www.youtube.com/watch?v=lxwUFNAxGyo>

# Conclusioni

- Applicazioni dell'AR sono ancora sporadici
- Come in caso dello sviluppo di computer (e del software per l'uso domestico), i settori «trainanti» sono il divertimento, il commercio, e come vedremo tra poco, anche il settore militare
- Per il momento, l'AR sembra ancora fantascienza, e per quello trova applicazioni nell'industria cinematografica
- In educazione, in confronto con il software multimediale, l'AR sembra di soffrire una «penuria» d'idee.