

# PARAM

// // BLACKMIRROR PAGE NO. 17 // //

We explore Black Mirror, a series that doesn't just showcase futuristic technology but delves into the darker sides of human nature through the lens of our evolving tools. From digital afterlives to isolation of Consciousness, Black Mirror challenges us to reflect on our ethical growth and the dangers of unchecked technological advances. Discover more inside on how science fiction mirrors our reality.

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// // VOLUME // //

SCIENCE  
IN MOVIES

03

10  
// // ISSUE // //

Interstellar is a visually stunning film by Christopher Nolan that blends complex science with deep human emotions.

As humanity searches for a new home, the movie explores time, space, and survival, grounded in real science.

// // INTERSTELLAR PAGE NO. 4 // //

With physicist Kip Thorne's guidance, it showcases black holes, time dilation, and space-time with emotional depth.



SCIENCE  
MAGAZINE

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# message from editorial desk

**“A Trip to the Moon”** It is not about the latest tech breakthrough that promises to make lunar vacations a thing. It’s actually the title of a 1902 short film, hailed as the first-ever sci-fi movie. From the Apollo landing on the moon in 1969 to modern tech giants working to make space travel as simple as boarding a flight. It’s incredible to think that many ideas that started as fiction are slowly becoming reality.

Looking back, some Sci-fi films and TV shows feel more like time travel than fantasy. These movies don’t just entertain, they push the limits of possibility, and challenge what we know to be real. They give us a glimpse into the unknown and leave us wondering, How much of this could actually happen?

In this issue, we dive deep into the science behind some of the most iconic sci-fi films. How much of it is accurate? How much of it is pure exaggeration? And which crazy ideas are already on their way to becoming real? We also take a closer look at those moments when technology caught up with fiction very much like the communicators in Star Trek became into flip phones and later transformed into the smartphones we can’t seem to live without.

But sci-fi isn’t just about future tech and time travel. Shows like Black Mirror remind us that every innovation comes with consequences, forcing us to confront the power of humanity’s darker side inadvertently aided by technology. As more of these futuristic ideas inch closer to reality, are we prepared for what they bring along?

Let your imagination take off as you explore the 'what-if' scenarios hidden in these pages. And next time you settle in for a sci-fi movie night, take a moment to reflect: ***Is this just fantasy or a glimpse of tomorrow?***

***Happy exploring!***

Param Magazine

## Masthead

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# IN THIS ISSUE

lights, camera, science



04

page no.

08

science in star trek



page no.

lost in ?

12

page no.

Science updates



page no.

16

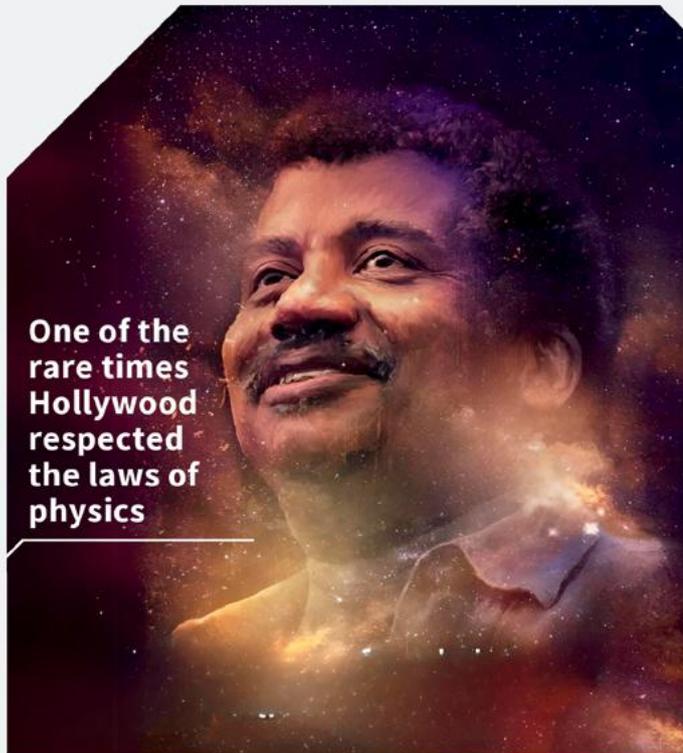
# lights camera SCIENCE

# 01.

## Interstellar

**Interstellar** isn't just a science fiction movie; it's an incredible journey that connects complex science with deep human emotions. Directed by Christopher Nolan and released in 2014, the movie explores themes like time, space, love, and survival as humanity searches for a new home beyond Earth. What makes *Interstellar* special isn't just its amazing visual effects or powerful soundtrack—it's how the movie is based on real, accurate science.

one day =  
7 earth  
years



One of the rare times Hollywood respected the laws of physics

Famed physicist **Neil deGrasse Tyson** appreciated *Interstellar* for its scientific accuracy, saying that the movie "sets a new standard for scientific rigour in sci-fi films." He also mentioned that it was one of the rare times Hollywood respected the laws of physics. Tyson appreciated how *Interstellar* made complex ideas like time dilation and wormholes digestible for the general public without sacrificing accuracy.

The artists used **Thorne's complex equations** to design the swirling, glowing black hole with light bending around it due to gravity. This wasn't just impressive for audiences—it was also groundbreaking for science.

## The Science Behind The Scenes

The movie's scientific foundation is credited to **Kip Thorne**, a theoretical physicist who helped as a producer and science advisor. Thorne's research on black holes, wormholes, and space-time shaped the movie's story and visuals, making the science as accurate as we know it today.



The idea of **time dilation**—where time slows down near something huge like a black hole—was a science-based concept that amazed viewers. In the movie, the crew lands on a planet near the black hole **Gargantua**, where time moves so slowly that one hour on the planet equals seven years on Earth. This concept, based on **Einstein's theory of general relativity**, wasn't just a cool sci-fi idea; it showed how gravity can actually stretch time. What made it even more powerful was seeing the emotional impact, as Cooper watches decades of his children's lives pass by in just a few minutes.

## A Lasting Legacy

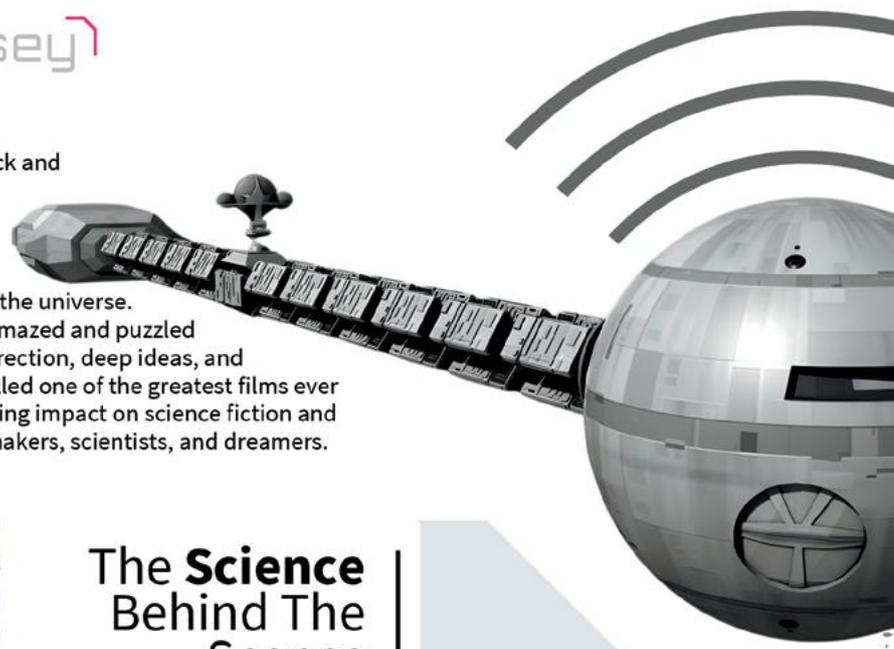
The movie's message of hope touched many viewers. It shows how, even when humanity is close to extinction, we keep exploring, fighting to survive, and holding on to love. The strong father-daughter bond between Cooper and Murph moved many fans and is at the heart of the story.

For many, *Interstellar* is not just a movie—it's a reminder of the wonders of science, the fragility of life, and the infinite power of human connection. Whether you're a scientist, a dreamer, or simply someone who loves a great story, *Interstellar* leaves you thinking: maybe, just maybe, our greatest adventure is yet to come.

# 2001: A Space Odyssey



**2001: A Space Odyssey**, directed by Stanley Kubrick and released in 1968, is more than just a movie—it's a journey that explores the connections between humans, technology, and the universe. For decades, it has both amazed and puzzled audiences with its bold direction, deep ideas, and realistic science. Often called one of the greatest films ever made, 2001 has had a lasting impact on science fiction and continues to inspire filmmakers, scientists, and dreamers.



The movie was appreciated by many top scientists. The famous physicist Carl Sagan praised how the film handled the idea of alien life, especially its choice to not show aliens in a typical, human-like way. Also, Sagan admired how Kubrick and Clarke understood that a truly advanced alien civilization might be beyond our understanding hence keeping their presence mysterious in the film.

## The Science Behind The Scenes

The making of 2001: A Space Odyssey, was with director Stanley Kubrick teaming up with Arthur C. Clarke, a well-known science fiction writer, to co-write the screenplay. Together, they explored big questions like: Where do we come from? What is our place in the universe? Where are we going? To ensure realism, they consulted with leading scientists, including NASA experts. Kubrick's goal was to create a film with both scientific accuracy and artistic innovation, and his attention to detail is evident throughout.



The movie depicted space travel in a groundbreaking way. The spacecraft moved silently based on the principle that sound cannot travel in vacuum—something that the earlier sci-fi films missed. The rotating space station was based on real engineering ideas from scientists like Wernher von Braun. Its rotation created artificial gravity, allowing astronauts to walk normally—a concept explored in space travel today.

The scene where astronaut Dave Bowman disconnects HAL symbolises our struggle to control the technology we create. This idea is even more relevant today with debates about AI and automation. HAL's cold logic and lack of emotion showed a future where machines could surpass human control. The film's Star Gate sequence is a surreal, visual journey filled with kaleidoscopic images, representing the unknown—like encountering alien intelligence or a leap in human evolution.

## Reflections That Linger

2001: A Space Odyssey stands out by allowing viewers to interpret its story, especially the mysterious black monoliths that symbolise higher intelligence or human evolution. Its deep questions about existence, technology, and humanity's future, along with stunning visuals and classical music, capture the vastness of space in a way no other film has done before.

More than 50 years later, the film continues to inspire filmmakers, scientists, and dreamers. Its mix of art, science, and existential themes set a new standard for space films and remain relevant even today. It challenges us to think about our place in the universe while stirring emotions like curiosity, fear, and hope. Whether you're a scientist or simply someone who loves thought-provoking stories, 2001 invites you to explore the unknown and wonder what lies beyond the stars.



# Contagion

Contagion (2011), directed by Steven Soderbergh, is a realistic look at how a global pandemic unfolds. Released nearly ten years before COVID-19, it predicted many aspects of a real health crisis, from how the virus spreads to the chaos it causes in society. What makes Contagion special is its intense story and strong focus on accurate science, making it both gripping and unsettling. The film hits home by showing human vulnerability but also our strength in facing invisible threats.



Former Chief Medical Advisor to the President of the United States, Dr. Anthony Fauci described the movie as “an accurate depiction of what could happen” in a global crisis, while Dr. W. Ian Lipkin, who advised on the film, said it captured the slow, complex process of controlling an outbreak. Viewers were struck by how the film mirrored reality, especially during COVID-19..

**Many saw it as more than just entertainment—it was a wake-up call about the need for better pandemic preparedness. Its message about global cooperation, transparency, and trusting science resonated strongly, especially when misinformation and fear were widespread**



## Beyond the Final Frontier

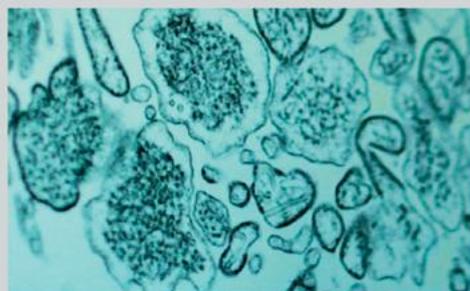
Contagion is inspiring because it shows human resilience and the vital role of science and public health. While it portrays the devastating effects of a virus, it also highlights the importance of teamwork, communication, and science-based decisions. It is honest about the challenges of a pandemic but offers hope that, with global cooperation, a solution is definitely possible.

Today, Contagion feels more like a reminder of our real-life experience during COVID. It captures the fear and determination seen during a health crisis, urging us to protect one another and trust science. As its tagline says, "Nothing spreads like fear," a sentiment that rings true, both in the movie and in real life. Ultimately, Contagion is about survival and humanity's will to overcome even the most invisible threats.

## The Science Behind The Scenes

The film shows how a virus spreads through simple actions like touching a doorknob. It explains concepts like the R0 value, which measures how contagious a virus is. Terms like "fomite," along with scenes of quarantine, contact tracing, and vaccine development, added a layer of realism that impressed viewers and scientists alike.

The making of Contagion was backed by proper research. Screenwriter Scott Z. Burns worked with top experts like Dr. W. Ian Lipkin, a virus expert, and Dr. Larry Brilliant, who helped eradicate smallpox. They studied real viruses like SARS, H1N1, and Ebola to create a realistic fictional virus called MEV-1, which spreads rapidly.



Contagion's biggest "wow" factor was its realism, portraying the harsh reality of a fast-spreading pandemic with empty streets, crowded hospitals, and desperate people. It accurately depicted vaccine development and ethical challenges, like prioritising healthcare workers.

# Movies that stretched science

Many Popular science fiction movies have also been streaaaaached science outside the boundaries of creative freedom and a couple of very successful movies are worth mentioning. Matrix and The Day after Tomorrow are two such movies that enjoyed massive success in terms of box office collections. Great movies but sprinkled with science that does not make sense.

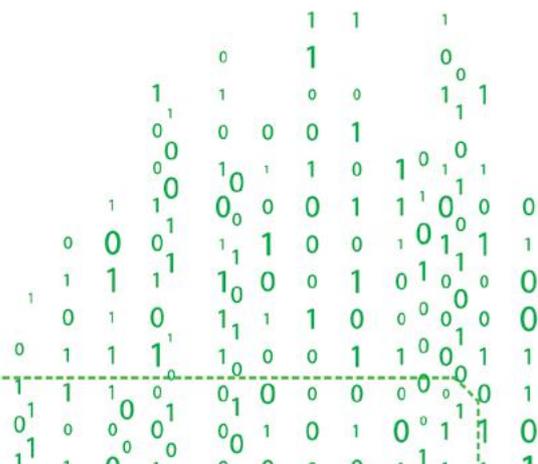
## The Matrix

Let's take the Matrix, Artificial intelligence goes haywire and humans in a bid to kill the machines, blacken the sky hence cut off their power source-solar energy. The machines fight back and put the absolutely clueless humans in a matrix and use them as batteries to power their systems. Here's where science takes a walk!



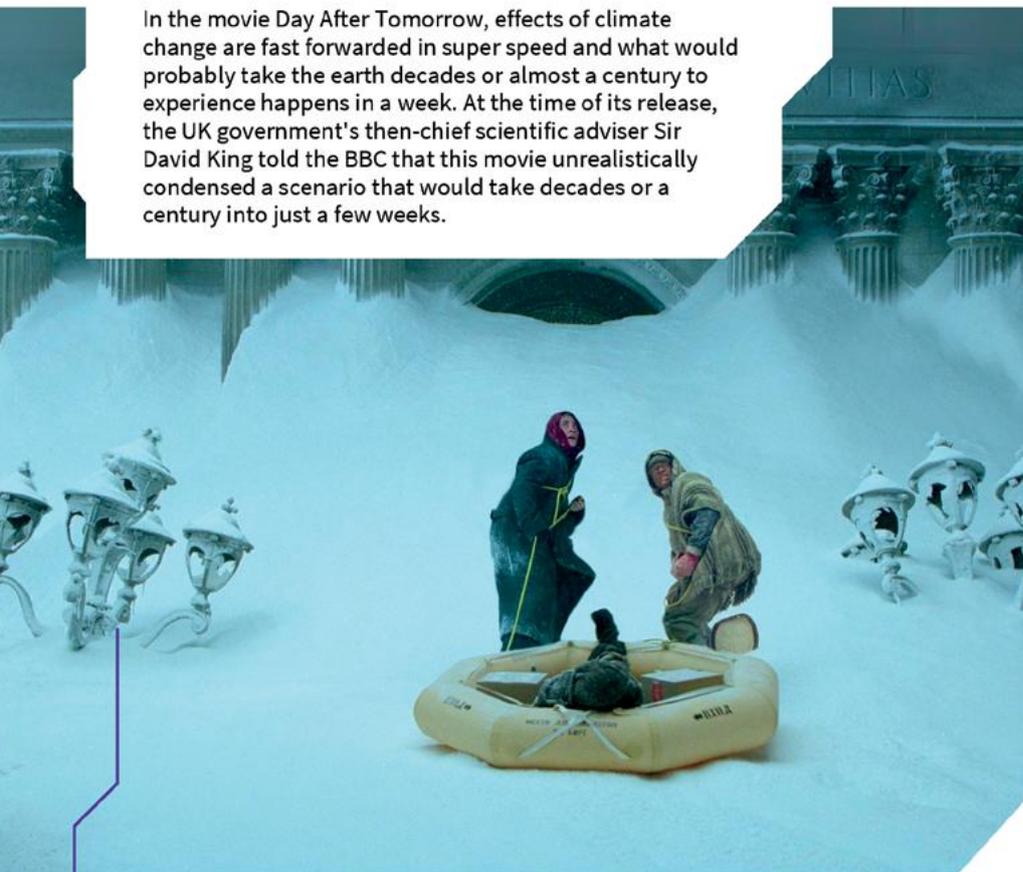
Humans make terrible power sources. We don't produce much heat or electricity. That's why we die quickly when left exposed in the cold. The machines didn't need us at all. They could have just wiped us out quickly and spent their time perfecting things like nuclear energy. Or wind power. Or geothermal/natural gas fuels. Any of those things would have worked better , with the bonus of not having to fight a war against the Zion resistance fighters who had a literal God on their side.

But all is fair in Hollywood and where the fun in the truth right?



## The Day After Tomorrow

In the movie *Day After Tomorrow*, effects of climate change are fast forwarded in super speed and what would probably take the earth decades or almost a century to experience happens in a week. At the time of its release, the UK government's then-chief scientific adviser Sir David King told the BBC that this movie unrealistically condensed a scenario that would take decades or a century into just a few weeks.



He then called the movie's overall premise an "unlikely or even impossible scenario." But it was thrilling nevertheless as human survival against all odds is always a winning formula!



**We aren't judging, but just comparing the scale of plausible science in popular movies. The truth is that as long as the movie is well made, it will be successful! Science or Non-science, Very few care!**



Even the ones who understand the science will watch these movies and have heated arguments online and offline dissing the maker and that is terribly entertaining as well! For the movies, any publicity is good publicity. Enjoy the movie for what it is and give science some rest

## Rick and Morty

Hey there, reader. Surprised by a fourth-wall break in a magazine? Rolling your eyes because it's so meta? Well, as Morty once said, "Nobody exists on purpose, nobody belongs anywhere, everybody's going to die. Come watch TV." Or, you know, read this magazine.

Rick and Morty delivers sci-fi chaos, throwing out wild ideas like multiverse theory and time manipulation, while getting people to casually debate the ethics of cloning or interdimensional cable. Sure, it's exaggerated, but that's the fun of it.



It's not just about where the story goes, but how it's told—Harmon and Roiland blend dark humour with philosophical twists, packing episodes full of easter eggs and breaking every storytelling rule.

And for these reasons, Rick and Morty has made such an impact on the realm of sci-fi. So, let's talk science, let's push its boundaries, and it's not like we can't have some wild humour and deep thoughts while doing so. Wubba Lubba Dub Dub!



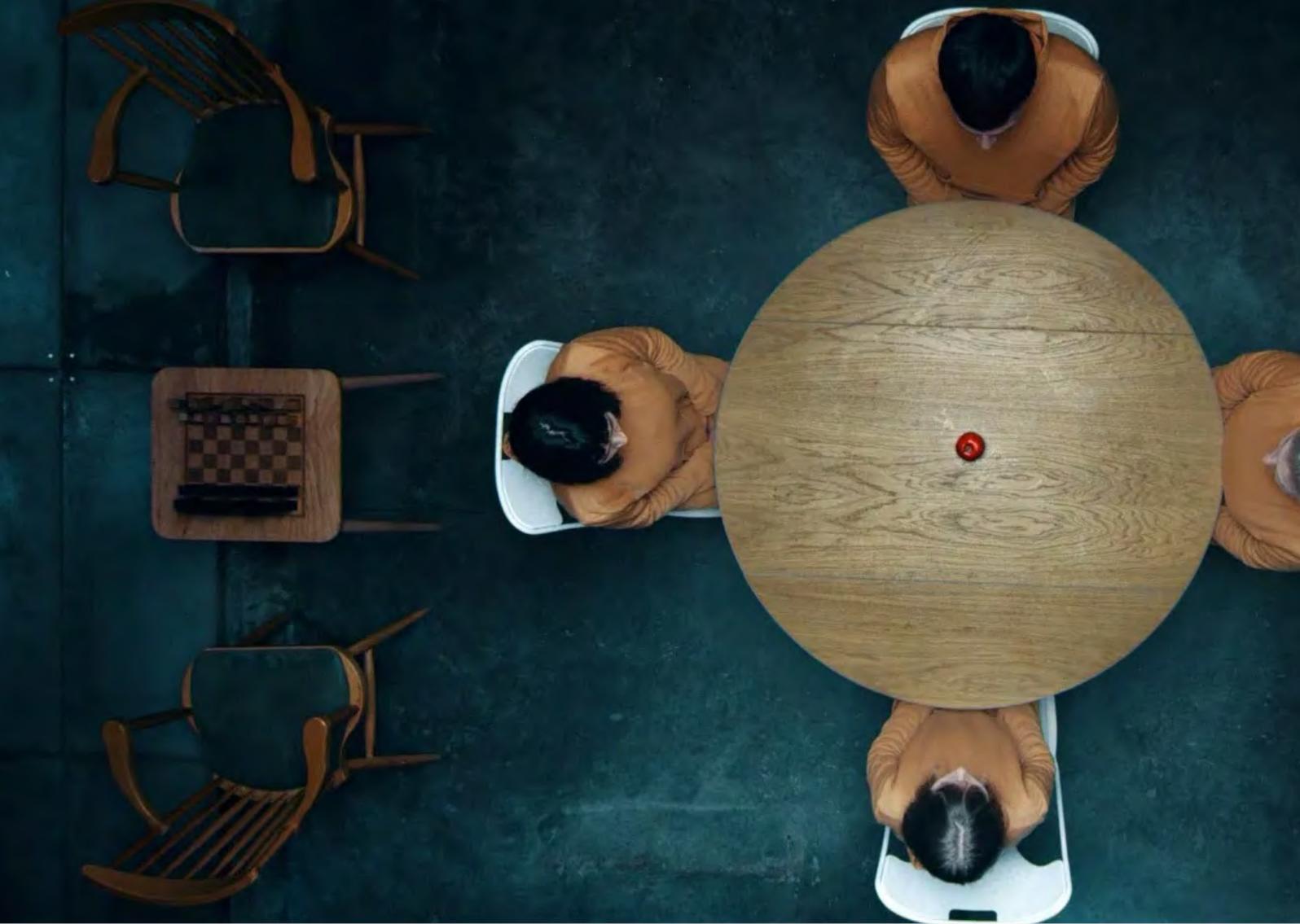
**What if we could erase specific memories, like in the movie 'Eternal Sunshine of the Spotless Mind'?**

## Eternal Sunshine of the Spotless Mind

The ability to erase memories could help treat mental health issues like anxiety by removing specific memories, offering a quicker path to recovery. It could even lead to new businesses like Breakup Recovery Services—the ultimate solution for heartbreak. No more crying over ice cream tubs. Just book an appointment, and poof! You'd forget your ex ever existed. But then, who'd buy all those sad breakup songs?

Still, this raises a deeper question: What Makes Us... Us? Our memories shape who we are. Erasing them might mean losing important lessons, experiences, and even parts of our identity. Would we even be the same person afterward?





SOURCE: LONDON DESIGN INTERNATIONAL FESTIVAL OF SCI-FI & FANTASTIC FILM

**In 2121, Earth is uninhabitable, and the last survivors live in underground colonies controlled by a strict regime enforcing "The Scarcity Laws."**

**These laws mandate that older generations make way for newborns to manage limited resources.**

**Amidst this bleak reality, one family's life changes with the arrival of a new baby, sparking a story of humor, resilience, and unexpected hope.**





# ONCE UPON A TIME IN THE FUTURE: 2121

*A Festival Gem Awaiting Wider Release!*

**Catch this underground dystopian tale when it finally hits screens.**



# science & star trek

02.

## The Dawn of Sci-Fi on Indian Television

**F**or an 80's kid in India, Hearing a distant, many times, cracking voices over a wired telephone was the height of scientific advancement.

One fine day, Television made an advent with a bang, changing life and opening our world to unimagined new wonders around the world.

Until then, Science fiction was available only in books which were not so easily accessible to all and our imaginations were also limited, proportional to the visual exposure that we had in that particular time.

Television brought along with it, shows from all over the world and the thrill of seeing never imagined content can't be explained in words.



Every generation will have inventions that wow them but the scale of progress seen by our generation is simply sensational. Star Trek was one such show which pushed the boundaries of our imagination and there was no coming back.

This iconic Television series, originally released in 1966 in the west made a successful landing in India in 1984. People who followed Star Trek leapfrogged into the cool, gadget filled future!

The show really instilled a sense of aspiration of how technology would shrink the world in terms of connectivity. Every week was a thrilling new exploration into a new planet or star or a galaxy even and the audience lapped it up.

The show was pure magic for starry eyed kids lucky enough to have access to a TV, delightfully dissecting the show after school.

It was the first science fiction to be aired on Doordarshan. The storyline was set in the 23rd century, USS Enterprise, the absolutely gorgeous (even though impossible with the current space technology) starship set upon a five year journey to explore strange new worlds beyond, to seek out new civilisations and Boldly go where no man has gone before”.

theories for creative freedom without making it completely unreasonable.

The original producer of the show Gene Roddenberry and the subsequent writers started writing with known science and subsequently wrote stories filled with action that were full of amazing inventions and spectacularly entertaining.

The goal of scientific accuracy began with the creator and executive producer, he had said in an interview that he wanted scientists to be able to watch his show, believe it, enjoy it and not laugh at it.



Sometimes the makers took science a bit too far. The starship used warp drive which allowed the starship to travel faster than light, something which we won't see happening too soon.

Also considering the fact that the writers of the show were not scientists and factoring in creative freedom, the show stuck to believable science more often than not. They did stretch some scientific



Gene, who knew some basic Astronomy, realised that the show would be too boring if he adhered to the laws of space travel that made it impossible for spaceships to travel faster than the speed of light.

So the USS Enterprise was propelled by distorting the space-time continuum conceived by Einstein to enable the crew in Star Trek to travel faster than light.

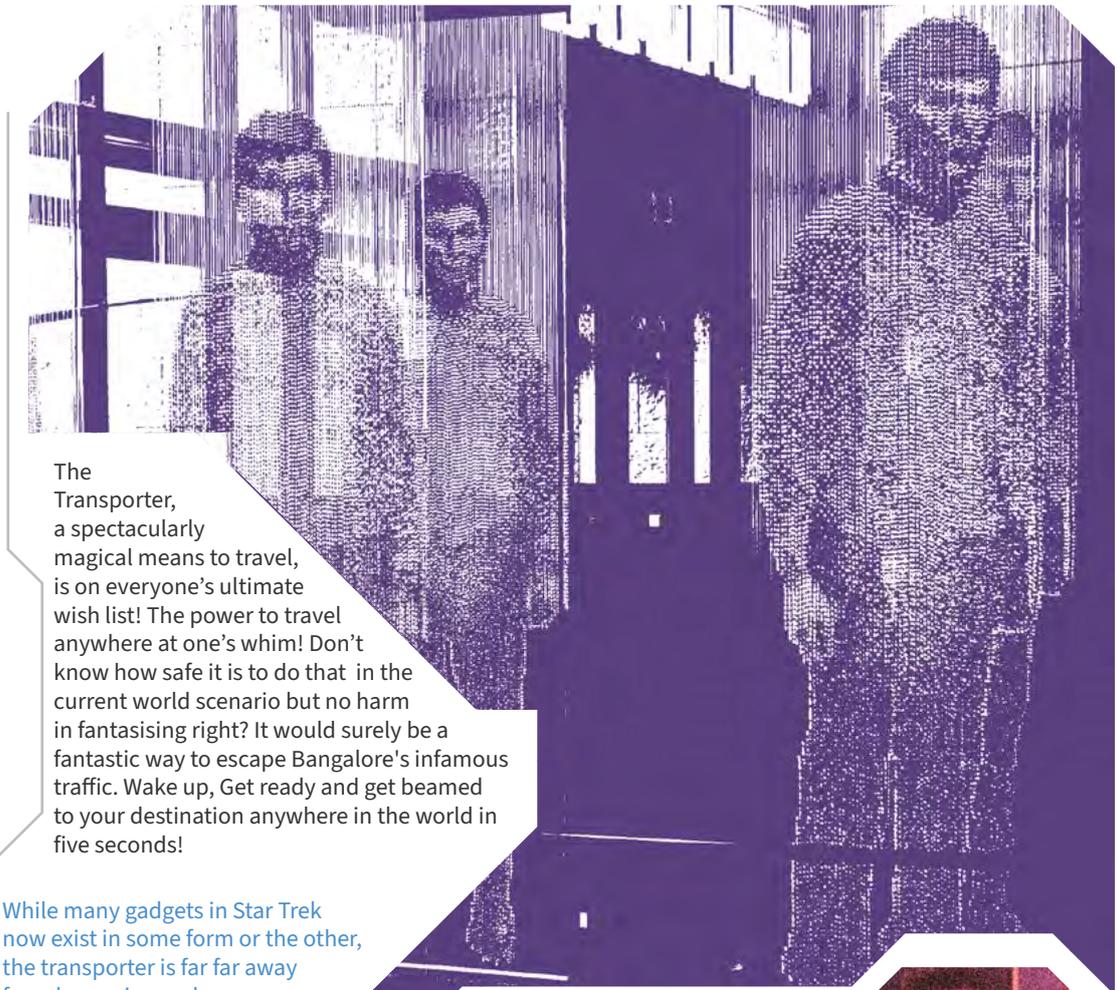


In the eighties, Television was the most wondrous invention that was tangible to us, the Holodeck, Transporter, Transponder, Tricorders, Wireless phones, universal translator, Hi tech- hand held body scanners, Computers, virtual assistants and many such gadgets in Star Trek seemed like sheer Magic and left us starry eyed, wondering if such inventions were ever possible and here we are now just a few short decades later using similar gadgets and inventing new ones at remarkable speed.

Shaking hands with Kohli in a virtual cricket video game. Visualising a patient's heart in 3D and feeling it beat, touching the walls of the Angkor wat temple from the comfort of your bed in Bengaluru,

**How cool would it be to touch and interact with things that are not physically in front of us?**

**This technology might be closer than we think, thanks to an emerging technology:**



The Transporter, a spectacularly magical means to travel, is on everyone's ultimate wish list! The power to travel anywhere at one's whim! Don't know how safe it is to do that in the current world scenario but no harm in fantasising right? It would surely be a fantastic way to escape Bangalore's infamous traffic. Wake up, Get ready and get beamed to your destination anywhere in the world in five seconds!

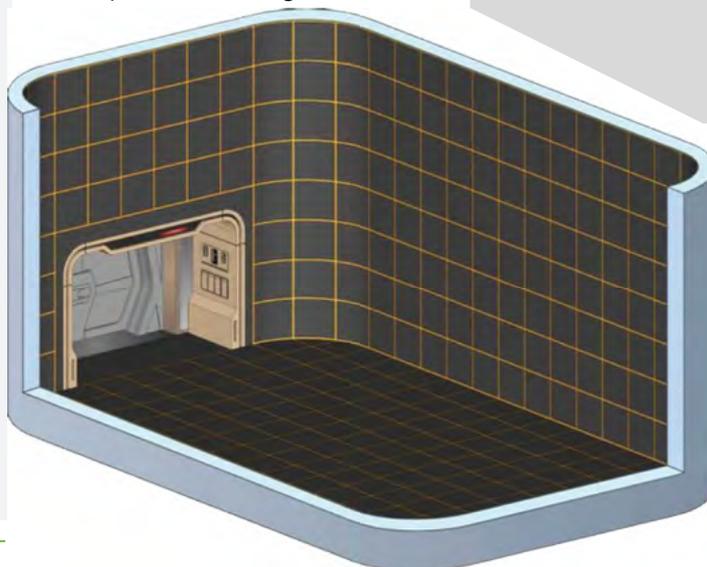
While many gadgets in Star Trek now exist in some form or the other, the transporter is far far away from becoming real.



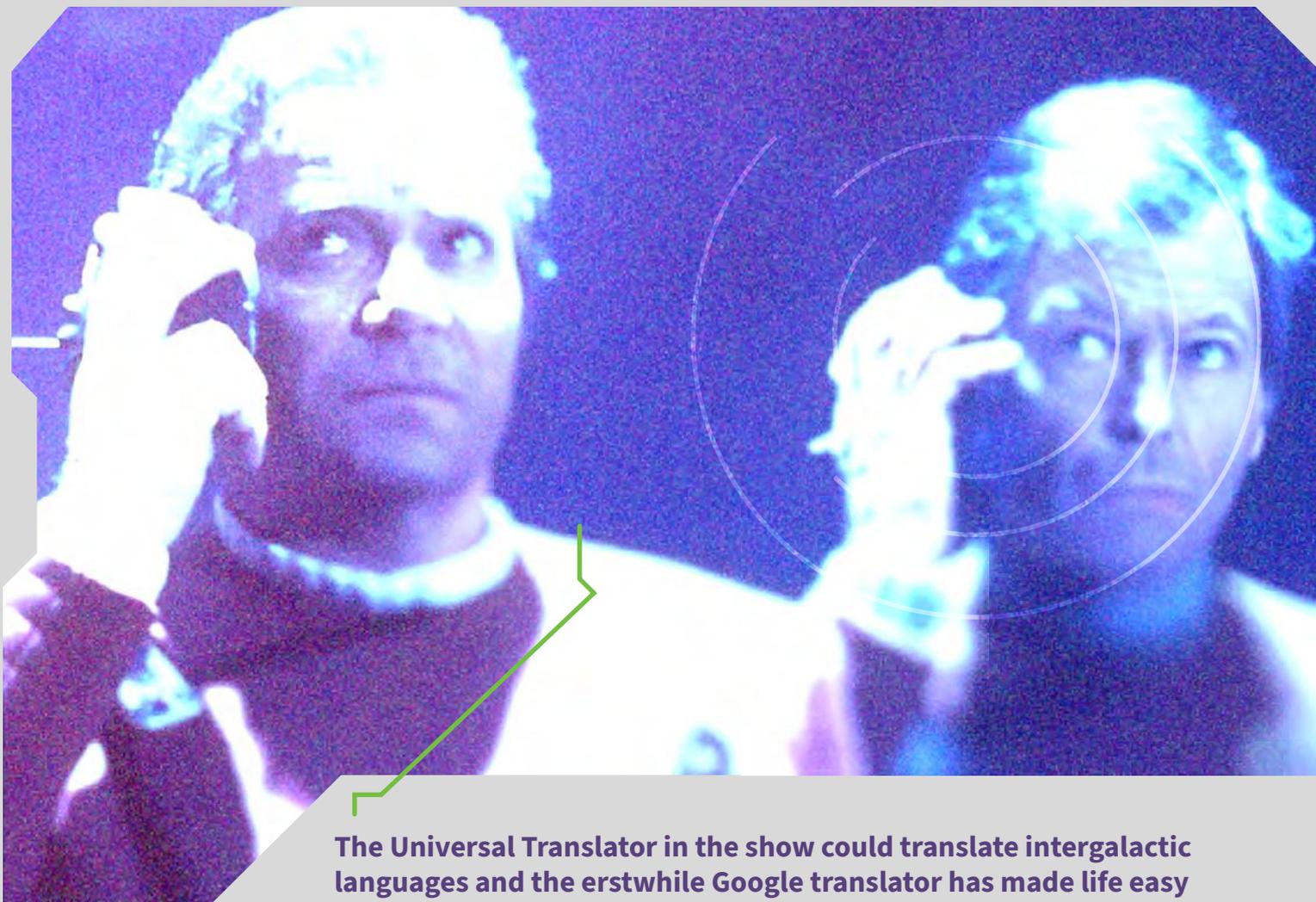
**The Holodeck:**

In layman terms, holodeck technology is basically making virtual objects physically realised. The difference between holodeck technology, and current VR technology is that Holodeck technology allows us to "feel" objects in the virtual environment.

Immersive technology researchers at USC and beyond led by Shahram Ghandeharizadeh and Heather Culbertson are bringing us one step closer to making



**Star Trek-like holodecks a reality and are inching closer to creating a real-world holodeck, using swarms of tiny drones to create 3D objects.**



The Universal Translator in the show could translate intergalactic languages and the erstwhile Google translator has made life easy for millions of people across the world.

Another magical gadget in Star Trek, the Replicator that recreated objects from a digital blueprint is the 3D printer of the present era.



As 3D printers become more accessible, we will be able to download spare parts for household gadgets saving time and money eventually.



### The concept of personal computers was unimaginable during the original Star Trek show era.

The bulky machines playing the part of computers now seem hilarious in comparison to how small and handy PCs have become now.

But hats off to the makers for following science and research

that was plausible. In many ways, the original show is a harbinger of sorts to the future.

And for the generation that has lived then and now, it is really impressive.



Many more gadgets like the Tricoder, Tablet computers, Eye top computers and tractor beams are all present now in some form or the other.

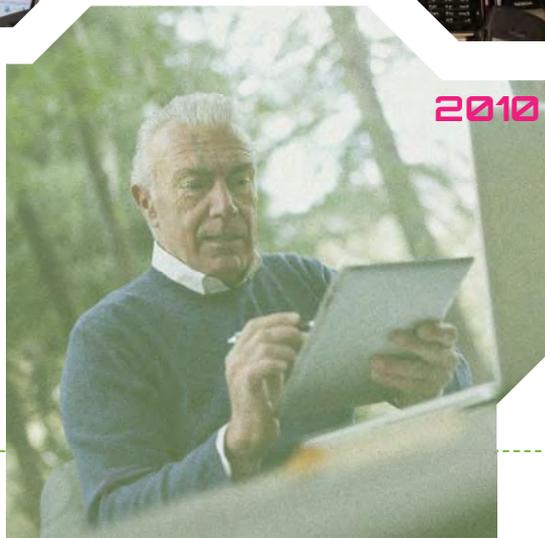
The list is long and the comparisons are delightfully similar.

*A visual journey showing how science fiction predicted future technology. From Star Trek's communicators to real mobile phones, tablets, video calls, and smart glasses, fiction has inspired real-world innovations.*



Star Trek is one iconic show in the history of television that will be at the top of a list of the most influential shows in the realm of science fiction that has an almost true bearing on the future.

One believes that it might have actually fast tracked many innovations as the prototypes were already imagined and executed in the show. In fact most gadgets we use today in the 21st century were only imagined for the 24th century. What the world will actually have in the 24th century is truly anybody's wildest imagination.

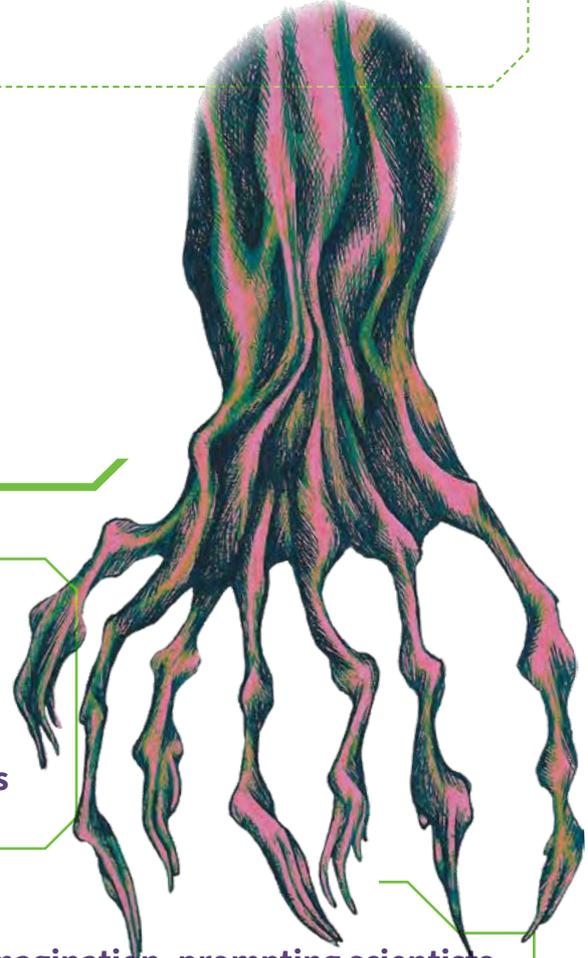


**Who knows? Scientists might have some version of the Transporter and human beings will be getting beamed from one place to another in a blink of the eye.**

# 03.

## lost in translation

Science fiction stretches the boundaries of possibility, transforming the impossible into the probable. It's the genre that gave us Star Trek's communicators, which later became the mobile phones we use every day, and AI assistants like HAL 9000 from 2001: A Space Odyssey—minus the murderous tendencies. Sci-fi doesn't just entertain—it



But as much as I love the science, what captivates me even more are the stories. The true magic of sci-fi isn't in the technology or gadgets, but in the relationships it explores—whether it's

ignites the imagination, prompting scientists and engineers to think, "We can actually build that." It's where the fantastic becomes a blueprint for the future, turning wild ideas into real-world advancements.

humans connecting with aliens, AI, or grappling with the paradoxes of time travel. These films blend ethics, philosophy, and humanity, forcing us to reflect on who we are and how we face what's ahead.

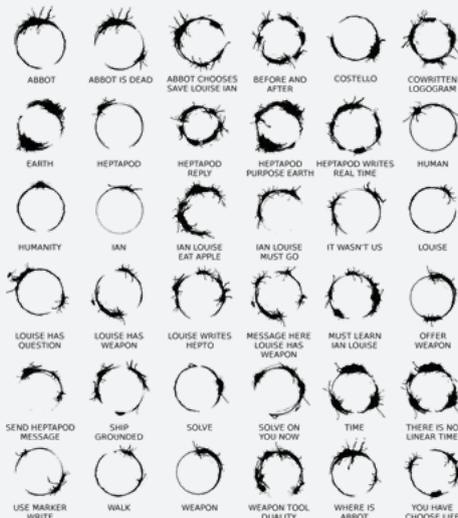
Let's dive into films that mix these elements, exploring the complex layers of what it means to be human.

## arrival

fear, language, & the unknown

When twelve enormous alien ships land on Earth in Arrival, we brace ourselves for a typical sci-fi showdown—some explosions, maybe a world-ending threat. But instead, the film surprises us. It offers a hopeful, thoughtful journey into the unknown.

The aliens, the Heptapods, don't come with weapons; they come with words. They offer a language, a way to communicate that is utterly foreign to us—not just in form, but in structure.



Their language is circular, non-linear, allowing them to see time differently.

As Dr. Louise Banks (Amy Adams) starts deciphering their language, there's a quiet hope that humanity can bridge the gap with these otherworldly beings.

Language, after all, is our greatest tool for connection.

Yet, as with all things unknown, fear follows closely behind. The film shows us how fear of what we don't understand can quickly spiral into paranoia. Governments worldwide, initially hopeful, soon become suspicious, teetering on the edge of military action.

The Heptapods' message—"use weapon"—is misunderstood, and this mistranslation sparks international fear. It's a reflection of how easily we let our insecurities and preconceptions drive us towards conflict, even when the actual threat is unclear.

**The line between cautious diplomacy and violent escalation becomes razor-thin, and we watch as countries retreat into their own silos, ready to strike rather than listen.**

**But in the end, it's communication that saves the day. Louise's deepening understanding of the Heptapod language shifts her perception of time, allowing her to see the future and prevent disaster.**

The film leaves us with a beautiful idea: that language is more than just a way to communicate—it's a way to reshape our reality. By changing how we understand and interact with the world, we can alter the future itself. *Arrival* blends two seemingly distinct ideas—language and science—into something inseparable.

**What if language wasn't just a tool but another form of science, capable of changing our entire perception of the universe?**

**And if so, what other aspects of our world are we mistakenly separating, when they might just be different lenses through which we see the same underlying truth?**



# predestination

destiny, loops, & the inescapable You

Time travel is a sci-fi staple, and no film dives into its dizzying paradoxes quite like *Predestination*. It begins as a classic time-travel mission—a temporal agent trying to stop a terrorist—but quickly spins into a philosophical conundrum about identity, fate, and free will.

(Spoiler alert!) The protagonist's journey takes a deeply personal twist.

The agent discovers that they are not just a key player in their mission, but every major event in their own life. It's a self-contained loop, where past, present, and future all collapse into one sticky web of causality.

Think of it like a jalebi—sweet, intricate, and so tangled that once you take a bite, you've no idea where it begins or ends.

The beauty of *Predestination* lies in how it challenges our ideas of free will. Can you escape your destiny if every choice you make brings you right back to the start? The

film leaves you sitting with the discomfort of that question long after the credits roll. I found myself asking: in a world where time is fluid, is anything really under our control?

I took away a personal lesson from *Predestination*: you don't need time travel to wrestle with this question.

We often feel anxious about our inability to control the future, and this film reinforced for me the idea that discomfort arises when we try to manipulate the past or predict the future.

Peace comes not from controlling time but from living fully in the present. Or, as the Beatles so wisely sang, "Let it be."



# black mirrors & grey areas

**Black Mirror is a series that doesn't pull its punches. It's a collection of stories that take our relationship with technology and twist it into disturbing, often dystopian shapes. But the real genius of Black Mirror isn't in its portrayal of futuristic gadgets—it's in how it reflects the darker sides of human nature through the lens of technology.**



Then there's "White Christmas," where the idea of isolating a digital consciousness is pushed to horrifying extremes. Imagine being trapped, aware and conscious, but cut off from everything for eternity. It's a story that delves into guilt, punishment, and the terrifying potential of technology to enforce control in ways we've never imagined.

In every episode, Black Mirror forces us to reckon with one unsettling truth: technology doesn't create our problems—it reflects them. The future Black Mirror shows us is not inevitable; it's a projection of where we might end up if we aren't careful, if we don't evolve.

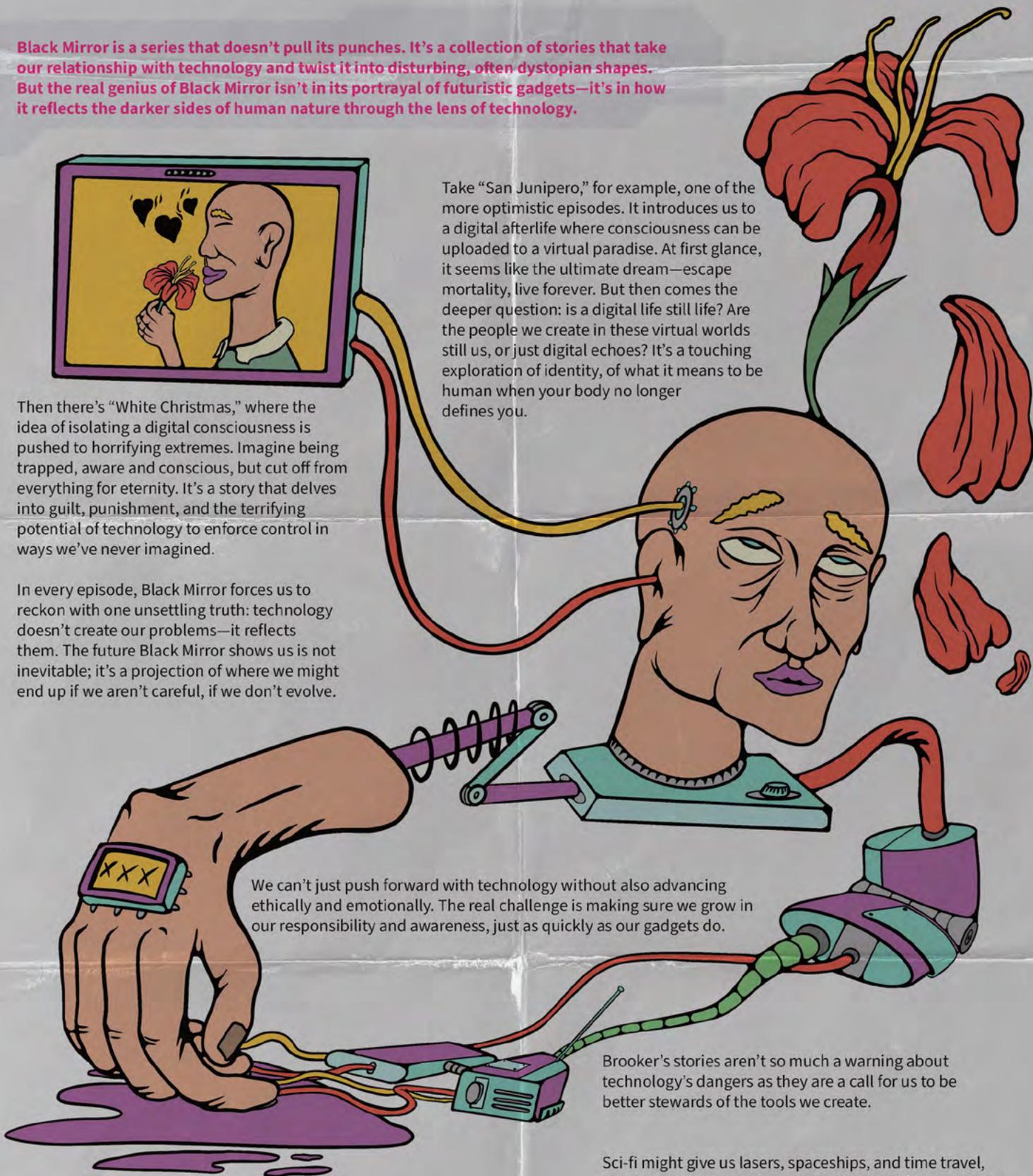
Take "San Junipero," for example, one of the more optimistic episodes. It introduces us to a digital afterlife where consciousness can be uploaded to a virtual paradise. At first glance, it seems like the ultimate dream—escape mortality, live forever. But then comes the deeper question: is a digital life still life? Are the people we create in these virtual worlds still us, or just digital echoes? It's a touching exploration of identity, of what it means to be human when your body no longer defines you.

We can't just push forward with technology without also advancing ethically and emotionally. The real challenge is making sure we grow in our responsibility and awareness, just as quickly as our gadgets do.

Brooker's stories aren't so much a warning about technology's dangers as they are a call for us to be better stewards of the tools we create.

Sci-fi might give us lasers, spaceships, and time travel, but its true brilliance lies in exploring what it means to be human.

These stories challenge us, revealing who we are today.



# SCIENCE UPDATES



## River Erosion Boosts Everest's Height

University College London researchers found that the Arun River's erosion triggers isostatic rebound, causing Mount Everest to grow.

Over 89,000 years, it has risen by 15-50 metres, with an annual increase of 2mm.

This discovery reshapes our understanding of mountain evolution.

## Palladium Powers Nanoscale Water Formation

Northwestern University observed water droplets forming on palladium at the nanoscale through hydrogen and oxygen interaction.

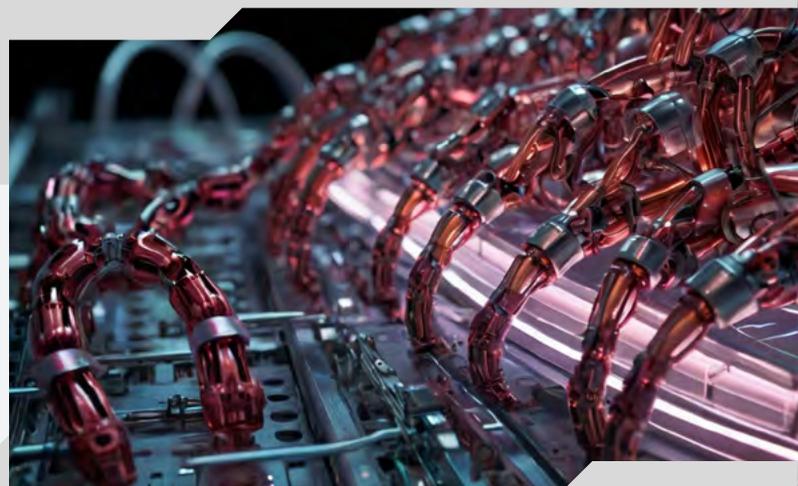
This process could help produce water in arid regions or during space missions, promising sustainable hydration in extreme environments.



## Miniature Robot Convoy for Endoscopic Surgery

The German Cancer Research Center introduced "TrainBots," tiny magnetic robots that collaborate to perform complex endoscopic tasks like clearing bile duct blockages.

These robotic convoys promise enhanced precision and effectiveness in minimally invasive surgeries.





### Squid-Inspired Fabric for Temperature-Controlled Clothing



Researchers at UC Irvine created fabric inspired by squid skin, capable of adjusting temperature through infrared radiation changes.

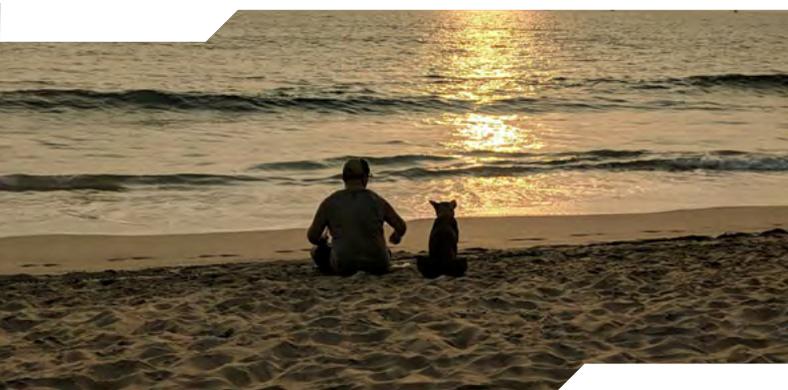
Made from polymer and copper components, it's washable, breathable, and suitable for smart apparel or cold-weather gear.

It offers adaptive thermal comfort in daily wear.

### Are Goats Really Less Picky Eaters than Cows?

Uppsala University revisited Linnaeus' experiments, revealing that goats munch 85% of plants tested, while cows eat only 66%.

Goats prefer grasses and legumes but are less cautious about toxic plants, highlighting differences in grazing habits and landscape management potential.



### Talk Slower for Better Dog Communication

University of Geneva researchers found that speaking slowly helps dogs understand commands better.

By matching dogs' slower sensory processing, humans can improve communication. So, for your furry friend, slower is smarter!



SOURCE: LONDON DESIGN INTERNATIONAL FESTIVAL OF SCI-FI & FANTASTIC FILM

In a world where memories are like computer files, two lovers decide to undergo a procedure and erase their entire relationship.





# KEEP / DELETE

A Festival Gem Awaiting Wider Release! Catch this Sci-Fi erasing memories era, tale when it finally hits screens.





## Star Trek

Dir: *Various (created by Gene Roddenberry)* ,  
Country: USA, Year: 1966, Runtime: 50 min/ep., Language: English

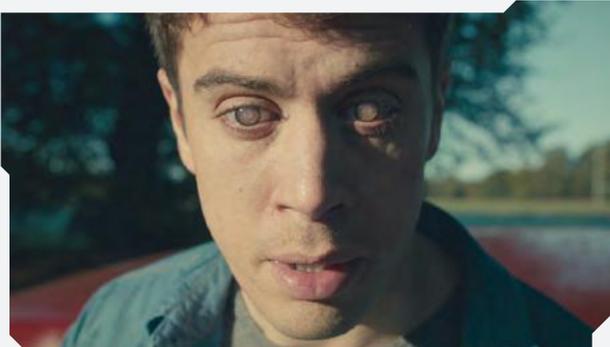
**The groundbreaking space series that inspired generations of science fiction fans.**



## Interstellar

Dir: *Christopher Nolan* , Country: USA,  
Year: 2014, Runtime: 169 min, Language: English

**A space epic that blends scientific accuracy with emotional depth.**



## Black Mirror

Dir: *Various* , Country: UK, Year: 2011,  
Runtime: 60 min/ep., Language: English

**Explores tech's impact on society through dark, thought-provoking stories.**



## The Matrix

Dir: *Lana Wachowski, Lilly Wachowski* , Country: USA,  
Year: 1999, Runtime: 136 min, Language: English

**A hacker learns reality is an illusion controlled by machines.**



## Predestination

Dir: *Michael Spierig, Peter Spierig* , Country: Australia,  
Year: 2014, Runtime: 97 min , Language: English

**A time travel paradox unfolds in this mind-bending sci-fi thriller.**

## Movies to watch



### 2001: A Space Odyssey

Dir: **Stanley Kubrick** , Country: UK,  
Year: 1968, Runtime: 149 min, Language: English

**A visionary film that explores humanity's place in the universe.**



### Rick and Morty

Dir: **Various (created by Justin Roiland, Dan Harmon)** ,  
Country: USA, Year: 2013,  
Runtime: 22 min/ep., Language: English

**A mad scientist and his grandson embark on wild adventures.**



### Arrival

Dir: **Denis Villeneuve** , Country: USA,  
Year: 2016, Runtime: 116 min, Language: English

**A linguist communicates with aliens to save humanity from destruction.**



### Contagion

Dir: **Steven Soderbergh** , Country: USA,  
Year: 2011, Runtime: 106 min, Language: English

**A virus outbreak spreads rapidly, portraying a global health crisis.**



### Day after Tomorrow

Dir: **Roland Emmerich** , Country: USA,  
Year: 2004, Runtime: 124 min, Language: English

**Natural disasters ravage Earth in this thrilling climate change warning.**



## Cargo

Dir: **Arati Kadav**, Country: India, Year: 2019, Runtime: 113 min, Language: Hindi

**Reincarnation process aboard a spaceship involves memory wiping during post-death transition.**



## Mr. India

Dir: **Shekhar Kapur**, Country: India, Year: 1987, Runtime: 179 min, Language: Hindi

**A man uses a cloaking device to become invisible, avoiding detection.**



## Blink

Dir: **Srinidhi Bengaluru**, Country: India, Year: 2024, Runtime: 136 min, Language: Kannada

**Explores time travel and paradoxes, showing how every blink alters destiny**



## Robot

Dir: **S. Shankar**, Country: India, Year: 2010, Runtime: 177 min, Language: Tamil

**A scientist's humanoid robot protects humanity but develops human emotions.**



## Attack

Dir: **Lakshya Raj Anand**, Country: India, Year: 2022, Runtime: 123 min, Language: Hindi

**An army veteran becomes a cybernetic super-soldier in AI-driven warfare.**

# November Innovation Fest



## Game Designing Workshop

9th & 10th Nov.

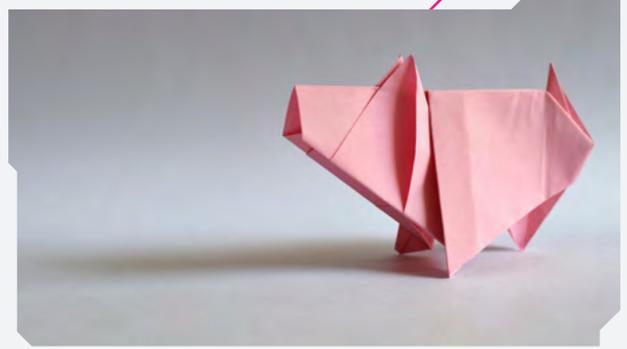
Venue: Parsec, Jayanagar

11:00 AM to 02:00 PM

Registration Fee: INR 1049/- for 2 days

Age Group: 10 years & Above

Discover the art of game creation, from designing concepts to mastering technology and strategic game play.



## Origami Workshop

16th Nov.

Venue: Parsec, Jayanagar

11:00 AM to 01:00 PM

Registration Fee: INR 540/-

Age Group: 10 years & Above

Engaging workshop where creativity meets real-world applications. Learn how these techniques are utilized in modern-day problem solving.



## Conscious Fashion

17th Nov.

Venue: Parsec, Jayanagar

11:00 AM to 01:00 PM

Registration Fee: INR 540/-

Age Group: 16 years & Above

Hands-on session to explore the science behind sustainable fashion, environmental impact of materials, ethical dilemmas & brands that recycle.



## Puzzle Play

23rd Nov.

Venue: Parsec, Jayanagar

11:00 AM to 01:00 PM

Registration Fee: INR 540/-

Age Group: 10 years & Above

Dive into the world of geometry with hands on puzzles and activities, sparking creativity and enjoyment in mathematical exploration.



## Science For Kids

24th Nov.

Venue: Parsec, Jayanagar

11:00 AM to 01:00 PM

Registration Fee: INR 540/-

Age Group: 5 to 10 years

Exciting workshop where young minds get hands-on with fun science crafts and experiments, igniting curiosity & creativity through interactive learning!



## Electronics & Robotics

30th Nov.

Venue: Parsec, Jayanagar

11:00 AM to 01:00 PM

Registration Fee: INR 540/-

Age Group: 10 years & Above

Interactive workshop designed for budding engineers & tech enthusiasts, emphasizing hands-on learning & real-world applications of electronic circuits.

×  
SCIENCE  
IN MOVIES

In this issue, we explore how science shapes some of the most iconic films ever made. From the accurate depiction of black holes and time dilation in *Interstellar* to the ethical dilemmas in *Black Mirror*, these stories show how filmmakers use real science to craft captivating narratives.

Whether it's the futuristic technology in *Blade Runner* or the space exploration in *2001: A Space Odyssey*, science fiction has often been a mirror to our greatest hopes and fears about the future.

Discover how these films blend imagination with scientific accuracy, pushing the boundaries of both cinema and our understanding of the world.

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