

**18<sup>th</sup> December 2025**

**Generative AI Mini Conference,  
Aberystwyth University**

**Real, enhanced, or bullsh\*t landscapes?:  
embedding generative AI exercises  
in physical geography learning activities**

**Stephen Tooth & Jayesh Mukherjee**

Department of Geography & Earth Sciences



Gracie Madison

6d · 🌐

IS AI A RUNAWAY TRAIN?

Not if we don't want it to be... See more



Home



Friends



Reels



Marketplace



Notifications



Menu

## a runaway train .....?



6d

AI has been an eye opener for a Luddite like myself. I'm pursuing a MA degree in my ripe old age. I produced a ChatGPT research proposal with a broad outline of the thesis chapters, complete with downloadable primary and secondary sources, and bibliography. My supervisor, a professor, says that ChatGPT saved me 8 months of dead ends and drudgery, and it also evaluated the originality of my proposal.

Reply



2



6d

AI is part of the revolution that takes away from us the burden of routine and boring work opening up the opportunities for being more creative and following more original ideas and opportunities. It also will lead to many jobs, like truck drivers and administrative personnel, to be eliminated and the introduction of a livable sum of money for all that covers the basic needs of a family. It will give them time to spend with their families or on gardening, conservation and volunteer work.

Reply



Transformative effects of ChatGPT on modern education: Emerging Era of AI Chatbots

Sukhpal Singh Gill<sup>a,\*</sup>, Minxian Xu<sup>b</sup>, Panos Patros<sup>c</sup>, Huaming Wu<sup>d</sup>, Rupinder Kaur<sup>e</sup>, Kamalpreet Kaur<sup>f</sup>, Stephanie Fuller<sup>g</sup>, Manmeet Singh<sup>h,i</sup>, Priyansh Arora<sup>j</sup>, Ajith Kumar Parlikad<sup>k</sup>, Vlado Stankovski<sup>l</sup>, Ajith Abraham<sup>m,n</sup>, Soumya K. Ghosh<sup>o</sup>, Hanan Lutfiyya<sup>p</sup>, Salil S. Kanhere<sup>q</sup>, Rami Bahsoon<sup>r</sup>, Omer Rana<sup>s</sup>, Schahram Dustdar<sup>t</sup>, Rizos Sakellariou<sup>u</sup>, Steve Uhlig<sup>a</sup>, Rajkumar Buyya<sup>v</sup>

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<sup>b</sup> Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, China  
<sup>c</sup> Rayson Performance Monitoring, Wellington, New Zealand  
<sup>d</sup> Center for Applied Mathematics, Tianjin University, Tianjin, China  
<sup>e</sup> Department of Science, King's Education, London, UK  
<sup>f</sup> Cymax Group Technologies, British Columbia, Canada  
<sup>g</sup> IQM Academy, Queen Mary University of London, London, UK  
<sup>h</sup> Jackson School of Geosciences, University of Texas at Austin, Austin, TX, USA  
<sup>i</sup> Centre for Climate Change Research, Indian Institute of Tropical Meteorology, Pune, India  
<sup>j</sup> Microsoft, Hyderabad, India  
<sup>k</sup> Institute for Manufacturing, Department of Engineering, University of Cambridge, Cambridge, UK  
<sup>l</sup> Faculty of Computer and Information Science, University of Ljubljana, Ljubljana, Slovenia  
<sup>m</sup> Machine Intelligence Research Labs, Auburn, WA, USA  
<sup>n</sup> Faculty of Computing and Data Science, FLAME University, Pune, Maharashtra, India  
<sup>o</sup> Department of Computer Science and Engineering, Indian Institute of Technology, Kharagpur, India  
<sup>p</sup> Department of Computer Science, University of Western Ontario, London, Canada  
<sup>q</sup> School of Computer Science and Engineering, The University of New South Wales (UNSW), Sydney, Australia  
<sup>r</sup> School of Computer Science, University of Birmingham, UK  
<sup>s</sup> School of Computer Science and Informatics, Cardiff University, Cardiff, UK  
<sup>t</sup> Distributed Systems Group, Vienna University of Technology, Vienna, Austria  
<sup>u</sup> Department of Computer Science, University of Manchester, Oxford Road, Manchester, UK  
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ARTICLE INFO

ARTSTRACT

**Keywords:** ChatGPT, Education, IoT, Academics, Chatbot, Artificial intelligence, Machine learning

ChatGPT, an AI-based chatbot, offers coherent and useful replies based on analysis of large volumes of data. In this article, leading academics, scientists, distinguish researchers and engineers discuss the transformative effects of ChatGPT on modern education. This research discusses ChatGPT capabilities and its use in the education sector, identifies potential concerns and challenges. Our preliminary evaluation shows that ChatGPT perform differently in different subject areas including finance, coding, maths, and general public queries. While ChatGPT has the ability to help educators by creating instructional content, offering suggestions and acting as an online educator to learners by answering questions, transforming education through smartphones and IoT gadgets, and promoting group work, there are clear drawbacks in its use, such as the possibility of producing inaccurate or false data and circumventing duplicate content (plagiarism) detectors where originality is essential. The often reported “hallucinations” within GenerativeAI in general, and also relevant for ChatGPT, can render its use of limited benefit

nature climate change

Article


<https://doi.org/10.1038/s41558-025-02425-8>

The promise and limitations of using GenAI to reduce climate scepticism

Received: 11 December 2024

Accepted: 14 August 2025

Published online: 19 September 2025

 Check for updates

Matthew J. Hornsey<sup>1</sup>✉, Samuel Pearson<sup>2</sup>, Christian Bretter<sup>3</sup>, Sarah MacInnes<sup>4</sup>, Jarren L. Nyland<sup>5</sup> & Saphira Rekker<sup>6</sup>

Large language models (LLMs) can support climate literacy by offering accessible, multilingual and personalized climate information. However, the effectiveness of these new communication tools remains unexplored. Here we conducted two studies to examine whether dialogues with LLMs can effectively reduce climate scepticism. In study 1 ( $n = 949$ ), climate sceptics who engaged in short conversations with ChatGPT showed small but significant increases in pro-environmental action intentions and decreased confidence in their initial sceptical views. In study 2 ( $n = 333$ ), similar effects were observed and extended to modest reductions in climate scepticism and policy support. It is noteworthy that the effects on reducing scepticism among sceptics are inconsistent across two studies and susceptible to decay over time. Increasing the conversation length from three to six rounds yielded no additional benefit. These mixed findings underscore the need for cautious, evidence-based integration of LLMs into climate communication strategies.

How well do DeepSeek, ChatGPT, and Gemini respond to water science questions?

Seyed Hossein Hosseini<sup>a,\*</sup>✉, Ali Pourzangbar<sup>b</sup>

<sup>a</sup> Department of Built Environment, School of Engineering, Aalto University, Espoo, Finland  
<sup>b</sup> Institute for Water and River Basin Management, Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

ARTICLE INFO

ARTSTRACT

**Keywords:** Large language model (LLM), Hydrology, Water science, DeepSeek R1, ChatGPT-4o, Gemini 2

This study aims to evaluate the performance of three prominent LLMs, DeepSeek R1, ChatGPT-4o, and Gemini 2, in addressing key questions within four core fields of hydrology and water science: machine learning and optimization, remote sensing, flood modeling, and sediment transport. LLMs’ responses are systematically compared to benchmark responses derived from review articles in the respective fields. To assess the LLMs’ efficiency, a novel evaluation rubric is introduced in this study, incorporating four key criteria: relevancy, accuracy, authenticity, and novelty. Findings revealed that each model can address the core aspects of the benchmark questions. DeepSeek R1 achieved the highest overall scores in machine learning and optimization, flood modeling, and sediment transport, while ChatGPT-4o demonstrated superior performance in remote sensing. Notably, DeepSeek R1 and Gemini 2 exhibited the lowest response similarity in 95 % of the evaluated questions, whereas ChatGPT-4o and Gemini 2 showed the highest similarity in 70 % of cases.

Ethics and Information Technology (2024) 26:38  
<https://doi.org/10.1007/s10676-024-09775-5>

ORIGINAL PAPER

ChatGPT is bullshit

Michael Townsen Hicks<sup>1</sup>✉ · James Humphries<sup>1</sup> · Joe Slater<sup>1</sup>

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Abstract

Recently, there has been considerable interest in large language models: machine learning systems which produce human-like text and dialogue. Applications of these systems have been plagued by persistent inaccuracies in their output; these are often called “AI hallucinations”. We argue that these falsehoods, and the overall activity of large language models, is better understood as *bullshit* in the sense explored by Frankfurt (On Bullshit, Princeton, 2005): the models are in an important way indifferent to the truth of their outputs. We distinguish two ways in which the models can be said to be bullshitters, and argue that they clearly meet at least one of these definitions. We further argue that describing AI misrepresentations as bullshit is both a more useful and more accurate way of predicting and discussing the behaviour of these systems.

**Keywords** Artificial intelligence · Large language models · LLMs · ChatGPT · Bullshit · Frankfurt · Assertion · Content

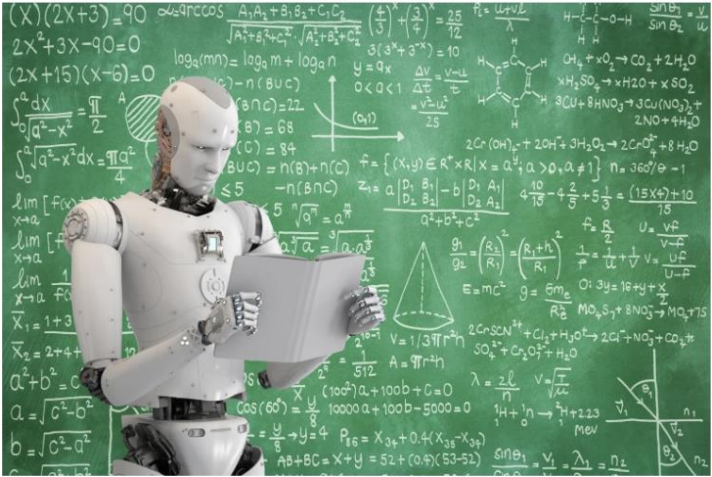
nature portfolio

PARTNER CONTENT Partner retains sole responsibility for the content of this article

Will ChatGPT give us a lesson in education?

There might be a learning curve as AI tools grow in popularity, but this technology offers teachers opportunities to help pupils acquire new skills around formulating questions and in critical thinking.

Produced by



Artificial intelligence can support some aspects of classroom learning, freeing human teachers up for one-to-one interactions. Credit: PhonlamaiPhoto



from a  
Facebook  
conversation in  
early 2023



**Stephen Tooth**

The way forward is obviously better education about how to use AI alongside other sources (internet and non-internet). No doubt I will start to use ChatGPT or equivalent in time to help (emphasis on help) with some tasks (e.g. writing bland text for promotional brochures, or to get acquainted with the parameters of a topic), much as I eventually did with Wikipedia. But for 'deep' academic work, there will be no substitute for my original thinking and word craft. It will be a matter of pride as much as ethics. What worries me is the number of people that won't use AI as a helpful start point but more as a gospel end point. Academics and others are going to have to make a very persuasive case that 'deep learning' - as opposed to 'shallow digital grazing' - is best achieved through drafting, reviewing, re-writing ....

Like Reply 3m Edited

need to place more emphasis on the learning **process**  
& student **reflections on that process**  
(e.g. awareness of, & engagement with, that process)  
& less on (just) the outcomes ....

need to try & avoid students wittingly (or unwittingly) 'bypassing the learning process'



## Structure of remainder of presentation

- 1) Introduction
- 2) About ourselves**
- 3) Critiquing generative AI-based descriptions of landscapes**
- 4) Assessing the veracity of web-sourced landscape images**
- 5) Whither physical geography teaching & learning about in the generative AI age?**
- 6) Questions? Comments? Ideas?**

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# ‘old school’ vs ‘new(er) school’? ‘slow tech adopter’ vs ‘rapid tech adopter’?

geomorphology  
geography  
geoscience  
environmental science  
human-environment interactions  
geographical education  
art-science & outreach activities



Natural Hazards (2023) 115:2749–2754  
<https://doi.org/10.1007/s11069-022-05644-w>

## SHORT COMMUNICATION

### Earth observation data to strengthen flood resilience: a recent experience from the Irrawaddy River

Surajit Ghosh<sup>1</sup> · Jayesh Mukherjee<sup>2</sup>

Received: 13 July 2022 / Accepted: 24 September 2022 / Published online: 29 September 2022  
© The Author(s), under exclusive licence to Springer Nature B.V. 2022

#### Abstract

The improvement of Earth Observation (EO) sensors and modern computational efficiency in the form of cloud analytics platform has made monitoring and interpretation of floods much more efficient. In this study, we present the recently occurred floods in the north-central section of the Irrawaddy River, inundating the adjoining farmlands on the active flood-plains along a stretch of 228 km. The amount of rainfall was observed to have gradually risen from early June 2022 captured through GPM data. Similarly, the water levels in the study stretch were observed to have increased from 98.08 m to 104.08 m (from Sentinel-3 altimetry) due to torrential rains on the northern hilly tracts of Myanmar. High-resolution Sentinel-1 SAR datasets have been used to estimate flood progression in the GEE platform. The total inundated area had risen from 196 to 989 sq. km. throughout June till the first week of July. Thus, EO data associated with accessible computing on cloud platforms help monitor flood progression, warn the community well in advance and support the development of crop insurance strategies, anticipatory actions and many more to strengthen evidence-based flood policy.

**Keywords** Flood · Irrawaddy River · Earth observation · GEE · Cloud computing · Sentinel-1



## The Thar Desert in India Landscapes transformed by human activities

Stephen Tooth,  
Manudeo Singh and  
Jayesh Mukherjee

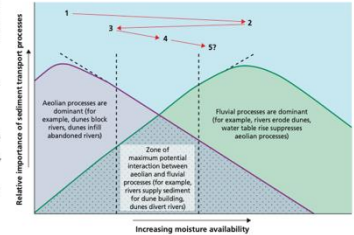
This article considers how one of the world's most  
populous deserts is being shaped by humans

### EXAM LINKS

- Hot desert landscapes (Drylands)
- Water security

The traditional view of the shaping of warm desert landscapes is of a battle between the action of wind (aeolian processes) and water (fluvial processes). In deserts, where annual moisture availability is low, wind was considered to continually but slowly shape the desert, while occasional flash floods resulted in short-lived bursts of rapid land shaping. This ‘dual-action model’ dominated early desert geomorphology, but greater attention is now given to interactions between aeolian and fluvial processes in desert landscape evolution (Figure 1). Recognition is also given to how human activities can influence these aeolian–fluvial interactions. Grazing, dam building, irrigation, mining and other activities can directly or indirectly influence the spatial patterns, strength and rates of these interactions. Some activities result in the greater dominance of aeolian processes (for example, following vegetation clearance) and others in more widespread fluvial process dominance (for example, reservoir flow releases), and this affects landscape shaping.

- Key to changing Thar Desert environmental conditions:
- 1 Final stages of last glacial cycle (cooler climate, lower sea levels, weaker monsoon = more aeolian process dominance)
  - 2 Following the last glacial cycle (warmer climate, rising sea levels, stronger monsoon = more fluvial process dominance)
  - 3 Last few thousand years to a few centuries ago (warmer climate, high sea levels, weaker monsoon = more aeolian process dominance)
  - 4 Last two centuries (warmer climate, high sea levels, stronger monsoon and rising human impacts = aeolian and fluvial processes both active, with more interactions)
  - 5 The future?



Source: Adapted from Bullard, J. E. and Livingstone, I. (2002)  
**Figure 1** Aeolian and fluvial process intensity domains. The greatest potential for interaction is where neither process is dominant



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Clay River South Africa



Oxbow lake

Meanders

Lateral Migration

Scoll bars,

Changes in date with scoll bars

End of lecture

Atacama Desert



Paleochannel

Sediment transportation

Incision and aggradation

Great Sand dunes  
Colorado Desert



Braided channel

River sink

Delta

Aggradation



Aberystwyth University Learning & Teaching Conference  
July 10-12<sup>th</sup> 2017

**How successful is within-lecture (self-)assessment  
of student engagement, knowledge & learning?:  
experiences from some Part 2 Geography modules**

**Stephen Tooth**  
**Geography & Earth Sciences**  
[set@aber.ac.uk](mailto:set@aber.ac.uk)

development of an earlier initiative





"In no more than 150 words, write a descriptive overview of the landforms in the image, and say how these landforms have been formed."



decontextualised images

ChatGPT (thinking mode)

Microsoft Co-Pilot

Gemini (2.5 Pro)





"In no more than 150 words, write a descriptive overview of the landforms in the image, and say how these landforms have been formed."

"The image shows an area dominated by sand dunes, which could be classified as linear or perhaps parabolic. The dunes trend from lower left towards top right, generally becoming more distinct (i.e. taller and wider) along their length, and some linear dunes merge downwind in y-junctions. The dunes have formed by aeolian processes. In many places, agricultural fields have encroached on the dunefields. Bedrock crops out among the dunes on the right. River landforms are not present but a pan has developed near the bottom centre of the image, possibly owing to a combination of local sediment reworking by runoff and wind deflation. The pan probably serves as a topographic low, so local runoff appears to be in the opposite direction to the dominant direction of sand movement on the dunes. Grey colouration of soils in and around the pan probably reflect salinity developed under conditions of net water deficit."

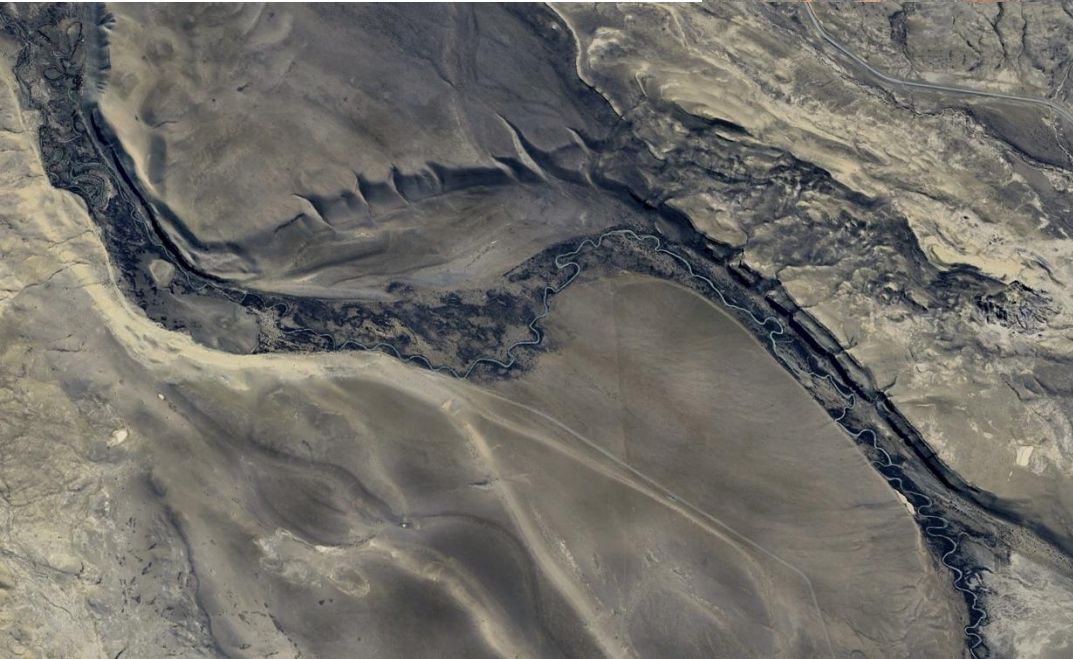
vs.

*"A pale, branching network of ephemeral channels dominates the scene, radiating downhill into a darker, irregular playa or salt pan at the lower-left. The channels are wide, shallow and multi-threaded — a braided/distributary pattern with numerous braid bars and starved meander loops — and feed a broad depositional apron where flow slows and sediments spread into a fan-like body. Lighter, lacy channel fills and pale sediment tongues show repeated overbank deposition; the central playa's dark surface and concentric lobes mark fine-grained muds and evaporite crusts in a closed basin."*

*"These landforms formed by episodic, high-energy runoff in an arid setting: infrequent flash floods carry abundant coarse sediment down slope, forcing streams to split and rework channels (braiding) and drop load as velocity falls (alluvial-fan and overbank deposits). Continued evaporation in the basin concentrates salts, producing the playa surface."*



"In no more than 150 words, write a descriptive overview of the landforms in the image, and say how these landforms have been formed."



decontextualised images

ChatGPT (normal mode)

ChatGPT (deep research mode)

ChatGPT (thinking mode)



"In no more than 150 words, write a descriptive overview of the landforms in the image, and say how these landforms have been formed."



ChatGPT (**normal mode**)

The image shows a desert landscape shaped by prominent fluvial processes. Deep, winding canyons and entrenched meanders cut through the arid terrain, indicating long-term river incision into resistant bedrock. These features suggest episodic but powerful water flow, likely from flash floods or ancient river systems that once carried greater discharge. The dark, sinuous channels reveal areas of concentrated erosion, while the adjacent flat valley floors show deposition of finer sediments. The steep canyon walls and terraces mark periods of downcutting followed by stability or lateral erosion. Overall, these landforms were formed by sustained fluvial erosion, guided by tectonic uplift and intermittent flow in a dry climate.

evidence?

long-term climate change  
(contradicts what is  
said above)



## possible student exercises/assessments?

- 'fact check' some text written by ChatGPT
- provide additional (comparative?) case studies or examples
- retrofit references to the text
- identify missing process-form linkages in the text
- write a short caption to accompany an image in a field guide or on an information sign board
- use ChatGPT to re-write text for different audiences (e.g. primary schoolchildren vs adult laypersons vs government ministers)
- + ..... ?

Mark Enstad  
Thanks for everyone's thoughts and ideas on this subject. I think I can safely say "We're just at the beginning."  
Like Reply 1d 2

Mark Enstad  
I've been using it in my geomorphology class and it's been a great tool. I have students generate answers to the knowledge assessment questions in Bierman and Montgomery's textbook and then write if the answer is sufficient (and if so add in another detail from the text ) insufficient (and if so tell me why) or wrong(explain what is wrong about it)  
So far most answers have been insufficient. First one we tried was about how erosion causes uplift and the students were quick to deem the answer insufficient. While it focused on isostatic rebound it did not discuss the underlying physics of density differences and buoyancy. The students love finding what the bot missed  
Like Reply 19h 4

Mark Enstad  
I love this because it also makes them less likely to trust it/rely on it themselves.  
Like Reply 17h

Mark Enstad  
Great idea.  
Like Reply 16h

Write a reply...

Mark Enstad  
<https://www.npr.org/.../chatgpt-ai-education-cheating...>  
NPR.ORG  
'Everybody is cheating': Why this teacher has adopted an open ChatGPT policy  
Like Reply 6h

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**Jon Foreman: Sculpt The World** added a new photo. · Follow  
13h ·

No its not AI!  
Furrowed Sun, 2025  
Created at Newgale with Layla Parkin

I think we started this one with the string and stick to get the circle but we began sculpting with the longest sections then worked both inwards and outwards from there. Once all the sections of sand were sculpted we responded to the space between by adding stones that fit will inbetween sections and then worked both inwards and outwards again getting smaller and dispersing further out. Endless possibilities, so many ways I could expand on this.



**David Attenborough Fans** · Join  
Maleesha Devindi · 2d ·

Even in the fiercest rain, a mother's love never falters.

This powerful moment shows a mother bird spreading her wings to shield her chicks from the storm — a reminder that real love protects, comforts, and stands firm no matter what.



**Class exercise:**  
can you distinguish between  
real, enhanced & bullsh\*t (highly distorted or fictitious Virtual Reality) landscapes?





Incredible planet · [Follow](#)

4d ·



Elephant foot glacier, Greenland.



3.6K

48 comments 195 shares



Like



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Send



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The Africa We Don't See on Tv



added a new photo. · [Follow](#)

3d ·

This is the Kalahari Namibia

Photo by Solly Levi Photography



100

5 shares





11h · 🌐

Zambezi River, Africa



Like



Comment



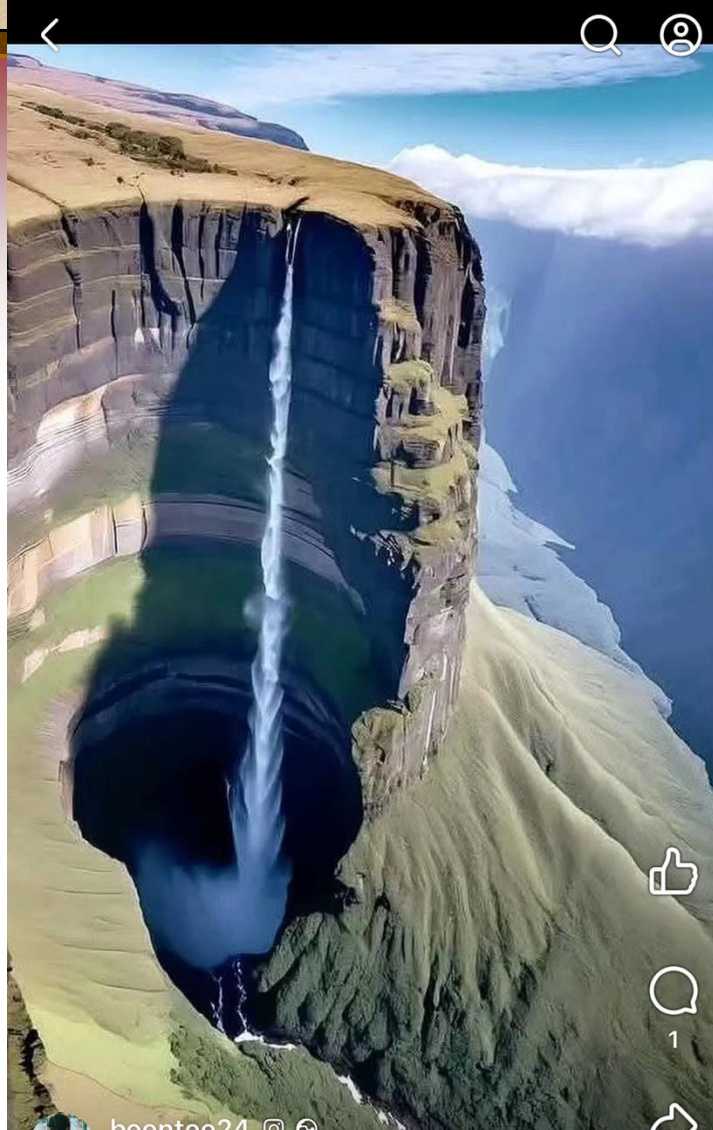
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5



beentee24    
 beentee24 · Original au...

Tugela Falls is the tallest waterfall in So... more 

UP NEXT: In our backyard....  ... 





Sir David Attenborough Fans ·

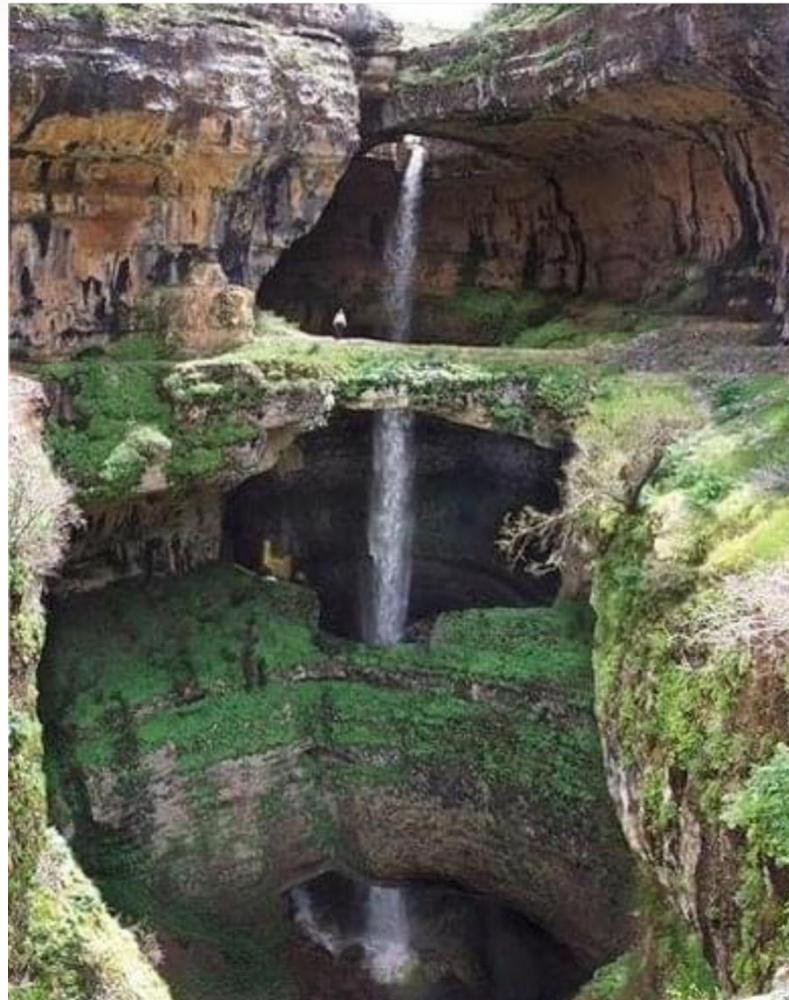


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2 d ·

he Baatara gorge sinkhole in Lebanon is a triple waterfall that drops 255 meters (837 ft) into the Baatara Pothole, a cave of Jurassic limestone.

More details/photos: <http://bit.ly/3kjNtdT>



You and 623 others

7 comments

60 shares



Art of Nature · [Follow](#)

7h · ⚙️



Monument Valley in Arizona 🤩💖



Send a gift



1.2K



29



211







Digital Reality · [Follow](#)

13 Jul · 🌐



This is Namibia, where the desert meets the ocean.



👍❤️😱 5.7k

58 comments 242 shares



Our Planet Daily · [Follow](#)

4d ·



Egypt Nile River



Like



Comment



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Share



1.1K



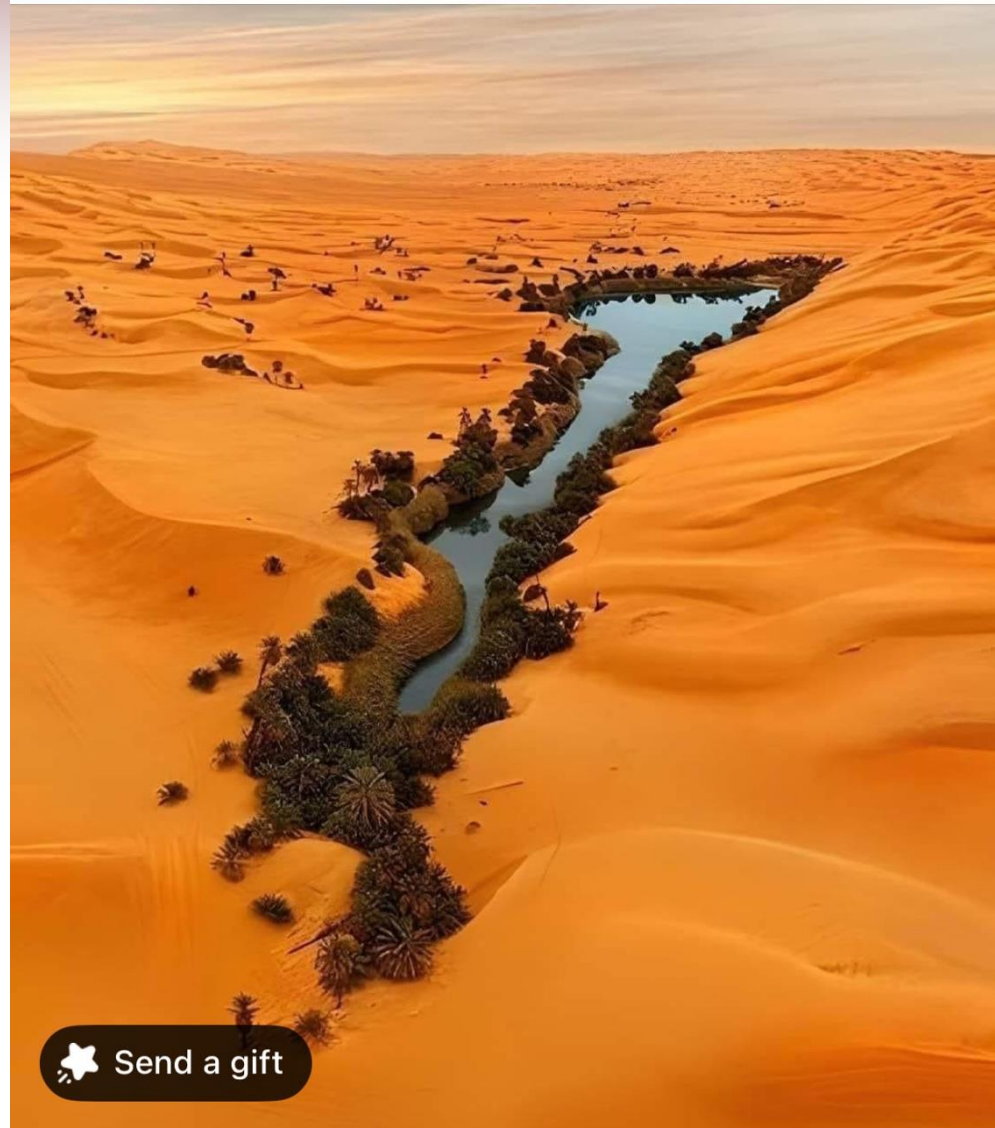


Geo Lens · [Follow](#)

1d · 🌐



What an oasis in Libya looks like.



Send a gift



1.6K

62 comments 141 shares

White Pocket is located in Vermilion Cliffs National Monument in Northern Arizona near the Utah border (14)



Home



Video



Friends



Marketplace



Notifications



Menu





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4d ·



Elephant foot glacier, Greenland.



3.6K

48 comments 195 shares



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real



The Africa We Don't See on Tv



added a new photo. · [Follow](#)

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This is the Kalahari Namibia

Photo by Solly Levi Photography



100

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real





11h · 🌐

Zambezi River, Africa



Like



Comment



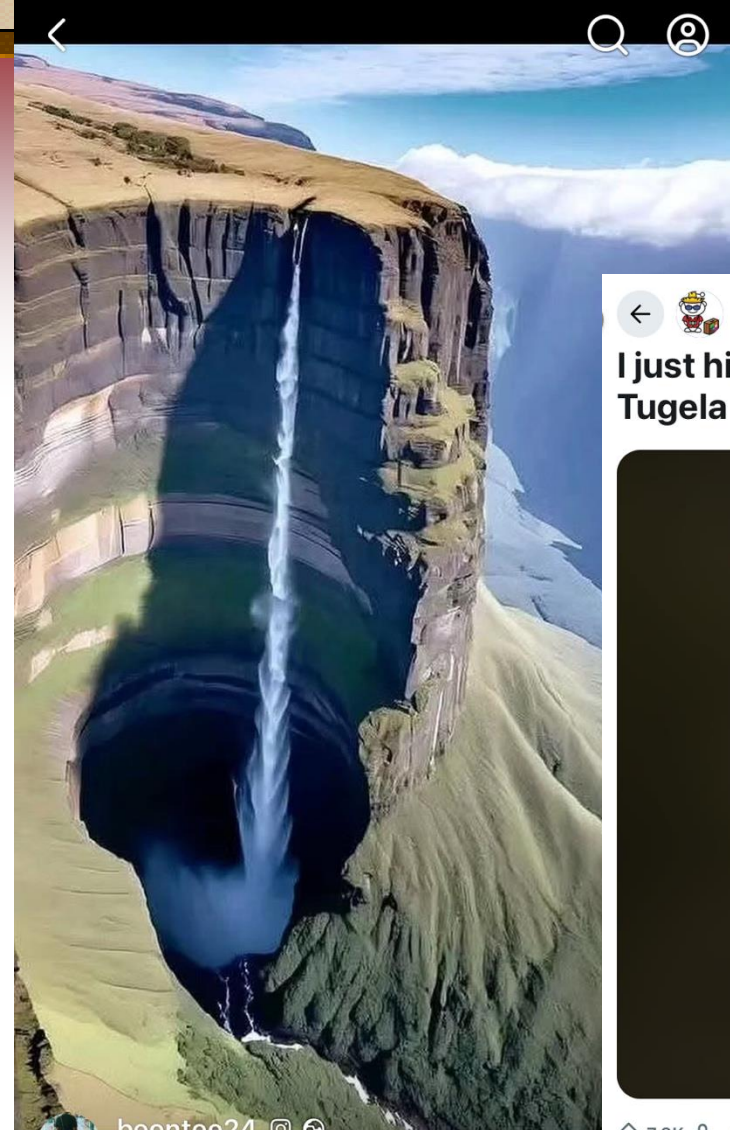
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Share



5



beentee24 · Original au...

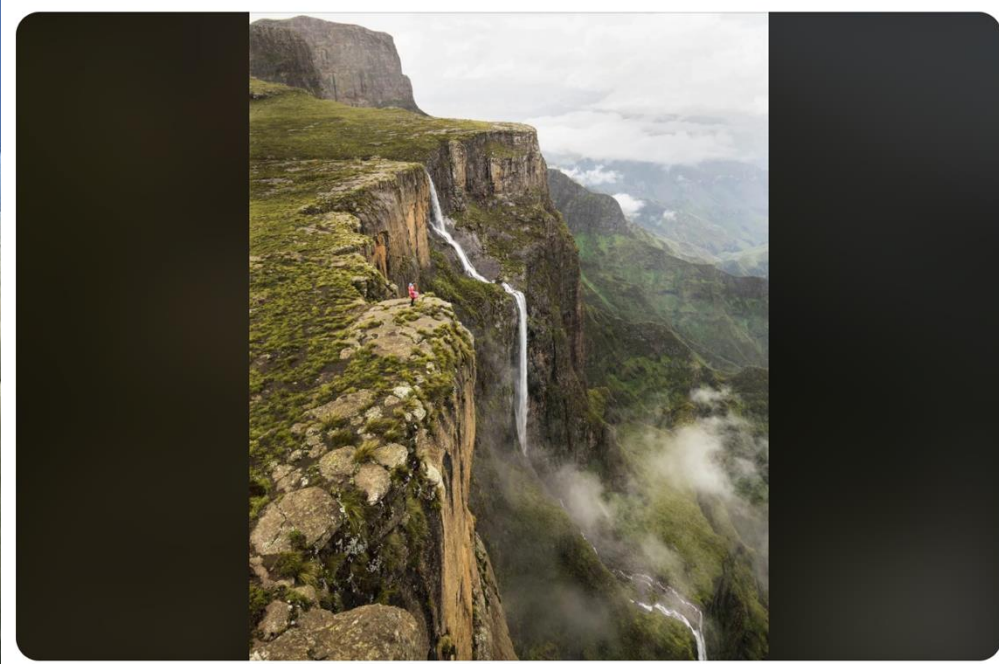
Tugela Falls is the tallest waterfall in So... more

UP NEXT: In our backyard....



r/travel · 8y ago  
Thov

I just hiked to the second tallest waterfall in the world, Tugela Falls in South Africa.



7.8K · 65





Sir David Attenborough Fans ·

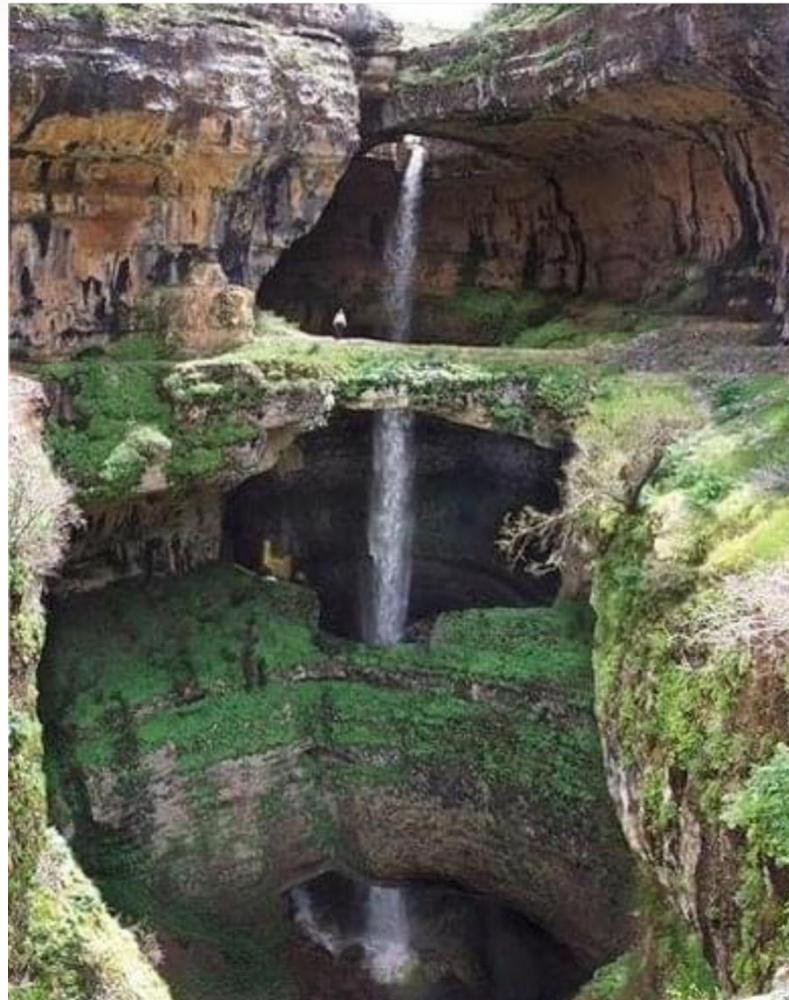


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2 d ·

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More details/photos: <http://bit.ly/3kjNtdT>



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7 comments

60 shares

real

<  Art of Nature · [Follow](#)  
7h · ⚙️ ...

Monument Valley in Arizona 🤩💖



🎁 Send a gift

👍 1.2K    💬 29    ➦ 211



real place,  
enhanced  
image





Digital Reality · Follow

13 Jul · 🌐

This is Namibia, where the desert meets the ocean.



👍❤️😱 5.7k

58 comments 242 shares

not sure  
.... real  
(possibly  
distorted  
by camera  
angle)?

Egypt Nile River

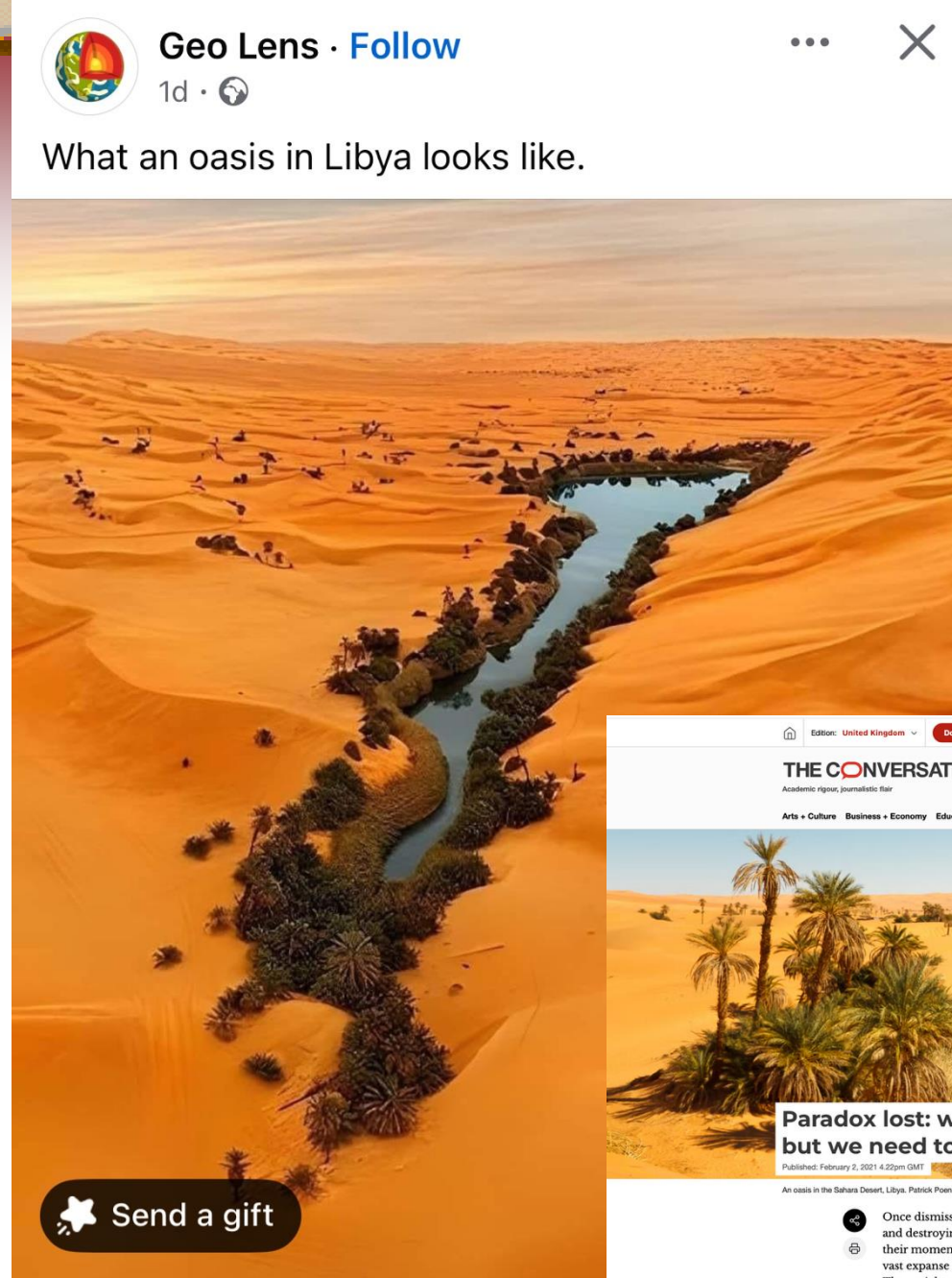


 Like  Comment  Send  Share

  1.1K

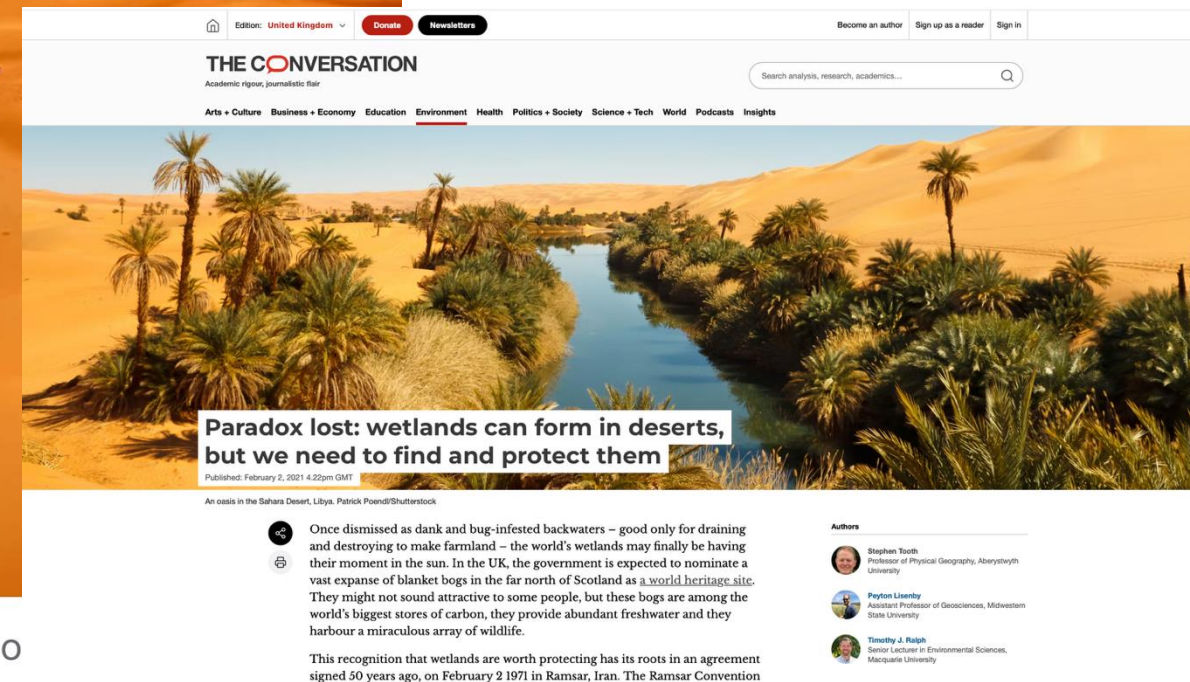


real  
(Ubari  
sand sea)



1.6K

62 co





White Pocket is located in Vermilion Cliffs National Monument in Northern Arizona near the Utah border (14)



Home



Video



Friends



Marketplace



Notifications

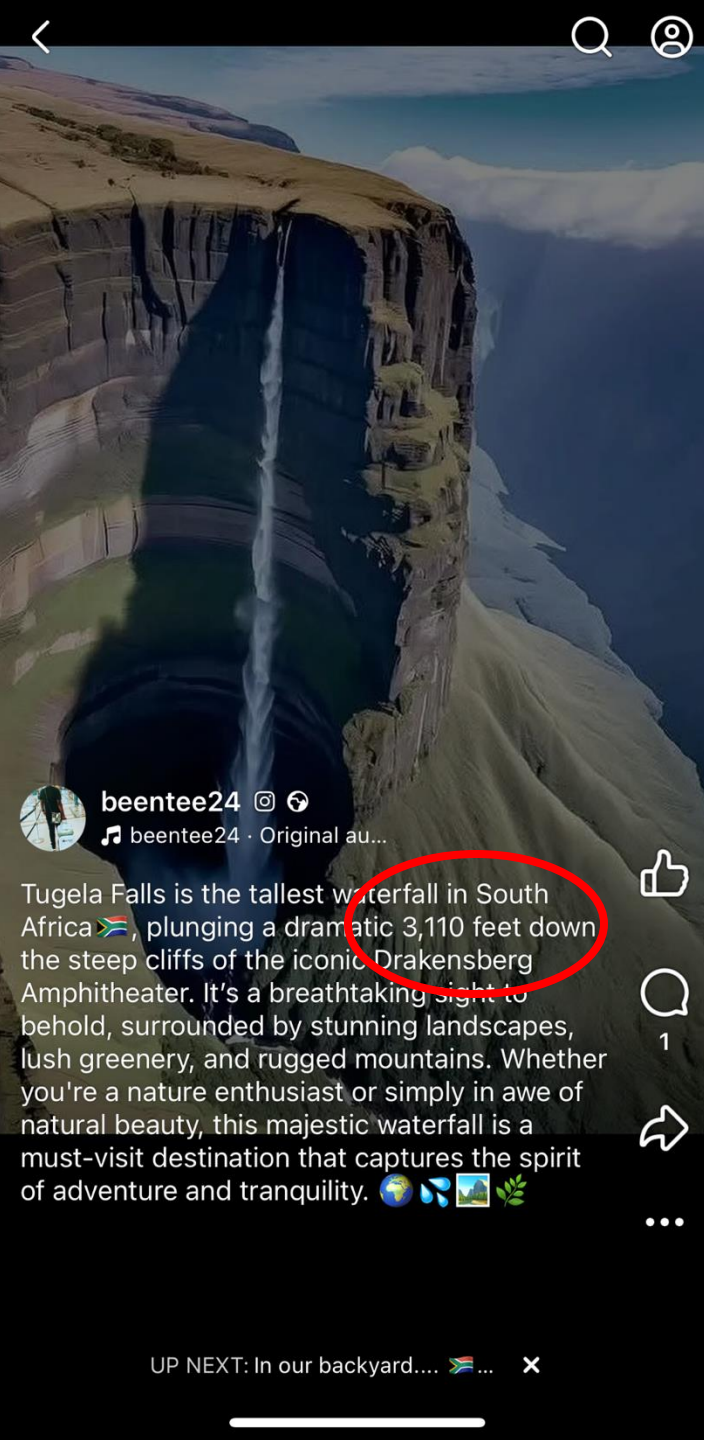


Menu



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Commentary:

## In Search of Australia's Highest Waterfalls

M.C.G. MABIN

Wollomombi Falls in northeast New South Wales and Wallaman Falls in northeast Queensland have for many years vied for the title of Australia's greatest single drop waterfall. Recently, however, that rank has been passed to Ellenborough Falls in northeast New South Wales (Australian Geographic, 1998; AUSLIG, 1999). This paper examines the various claims, and suggests the most likely candidate for the title.

### Significance of waterfalls

Geographical interest in waterfalls waned after Davisian style geomorphology lost favour. However, since Young's (1985) review of waterfall types and processes, interest has been revived, particularly with regard to waterfalls in Australia. Bishop and Goldrick (1992) and Goldrick and Bishop (1995) address the significance of falls as knick points in stream long profiles. Nott (1996) discusses the palaeoclimatic significance of waterfall plunge pools. Weissel and Seidl (1997) consider falls in the context of escarpment erosion, and Nott *et al.* (1996) examine the significance of waterfalls in the denudation of highlands. In Australia, most high waterfalls are associated with the Great Escarpment (Ollier, 1982), which is perhaps the continent's most significant single

landform. Thus the waterfalls that plunge over it are worthy of attention, particularly as these are sites where the Escarpment is most rapidly evolving.

Waterfalls are also awe-inspiring natural wonders. With the many possible permutations of height, width, number of leaps, volume and seasonality of water flow, there are many opportunities for the superlatives that help to make these features worth seeing. However, there can only be one waterfall that has the greatest vertical drop, and it should be possible to make a definitive claim.

### Defining a waterfall

Part of the problem of establishing which is the highest waterfall revolves around the definition of a waterfall. Rapid, cascade, cataract and waterfall are all terms used to describe steep, fast-flowing sections of watercourses. However, usage of the terms is quite variable, often overlapping, and the concepts may include ideas other than steepness alone. What really is a waterfall, and if a steep watercourse is not a waterfall, what should it be called?

*The Encyclopedic Dictionary of Physical Geography* tersely describes a waterfall as 'A stream that falls from a height' (Goudie, 1994, 553). The *Encyclopaedia Britannica* includes the concept of abrupt steepening of the channel (Lustig, 1988, 898-902), and *The Encyclopedia of Geomorphology* allows for a very steep or vertical fall in the river course (Ford, 1968,

*Australian Geographical Studies* • March 2000 • 38(1):85-90

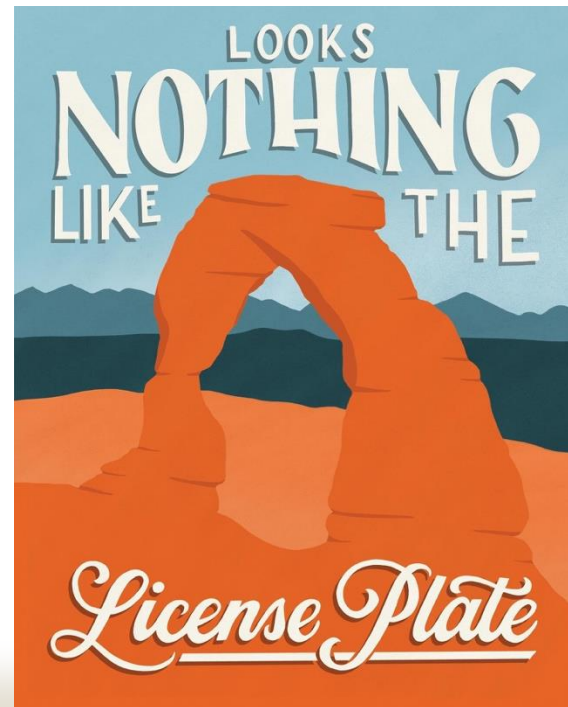
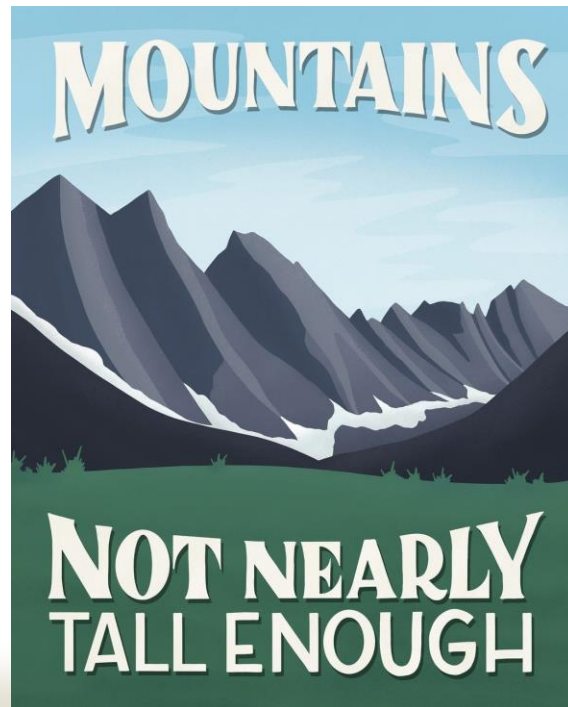
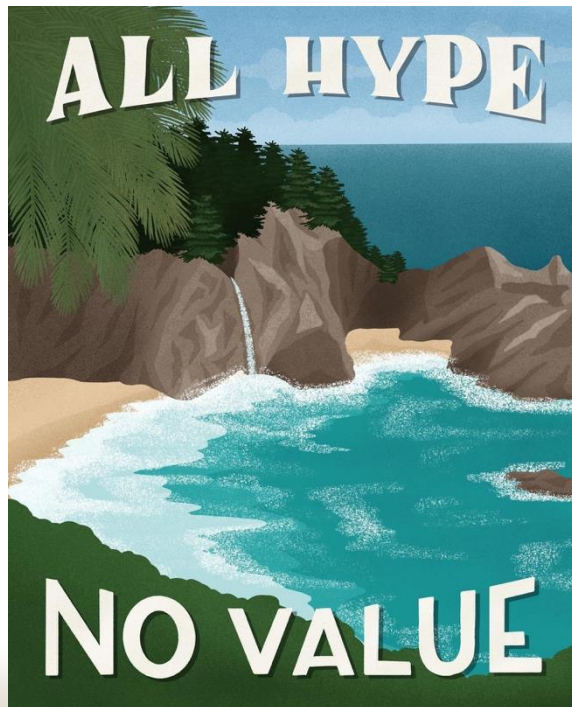
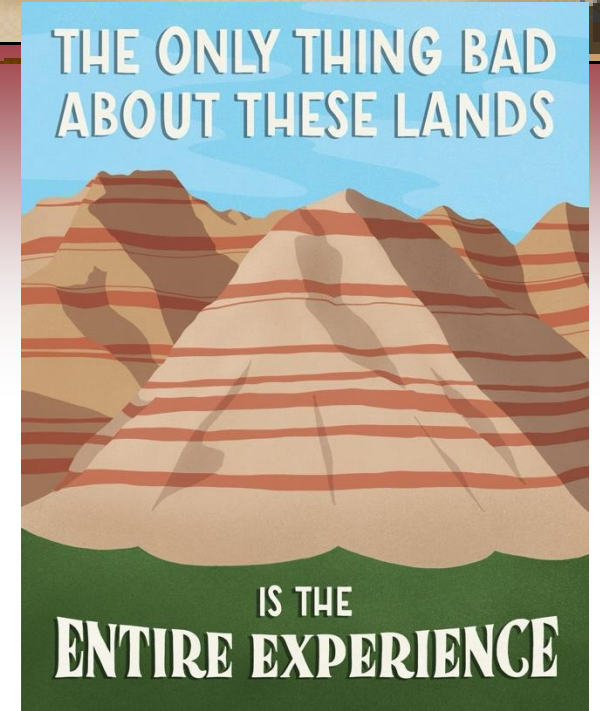
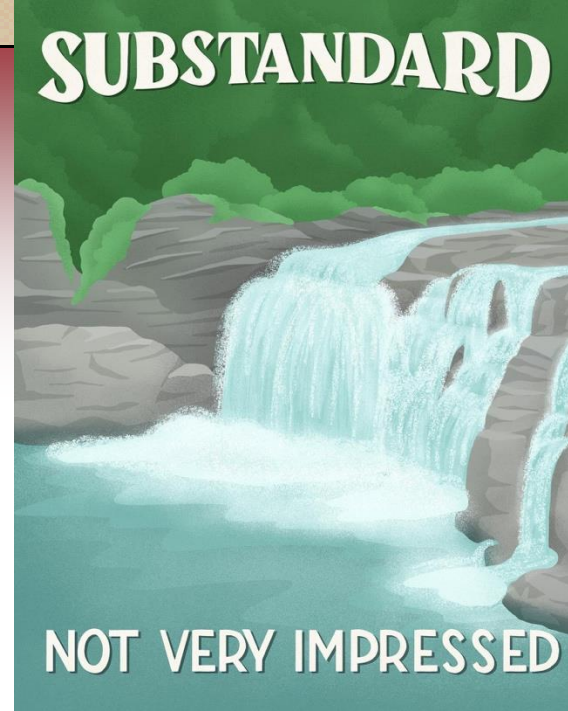
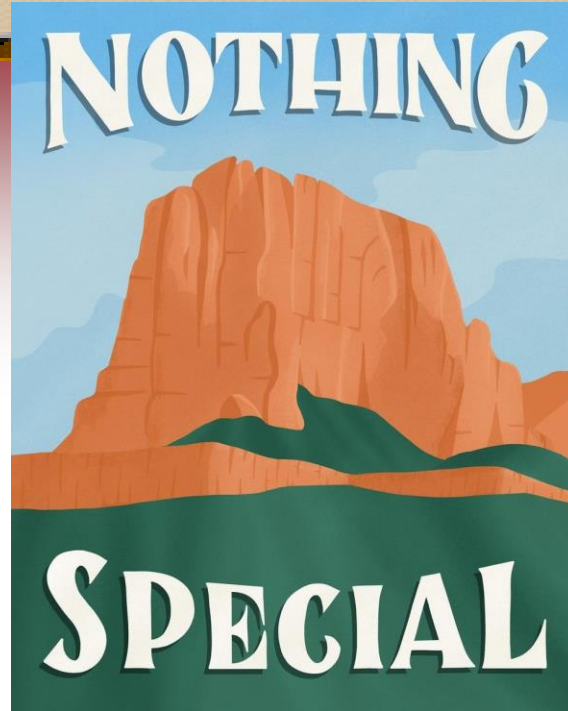
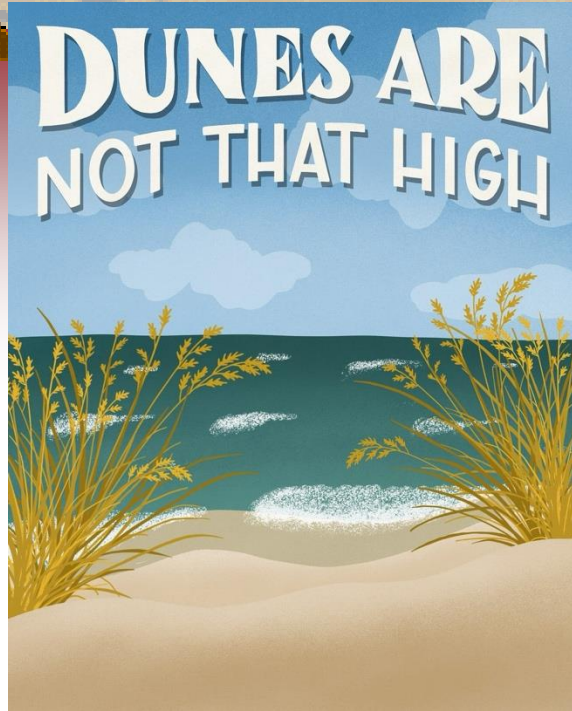
## Conclusion

Waterfalls are important geomorphological features that are rightly receiving renewed interest from geomorphologists. As natural wonders they can be spectacular for many reasons, but there will only be one that has the highest continuous drop. Examination of the published heights of many of Australia's waterfalls shows that there is considerable reason to doubt many of the claims as the heights are often far in excess of what is possible from topographic data, and the term waterfall appears to have been used rather loosely. A waterfall should have a clearly marked top where the stream drops abruptly over a lip to descend continuously a near-vertical rock face and end in a clearly defined base. Using this definition, Wallaman Falls are clearly the highest known falls in Australia, with

UP NEXT: In our backyard....

3100 ft = 948 m? (combined total drop of its five distinct free-leaping falls)





*License Plate*

artist Amber Share  
started making  
"Subpar Parks"  
images after reading  
1-Star US National  
Park Reviews on  
pages such as Yelp,  
TripAdvisor, & Google






In the aftermath of Hurricane Helene (2024) an AI-generated image spread across social media of a girl holding a puppy.

## When the Flood Images Are Fake but the Consequences Are Real



**Dr Andrew Rochford**   
Medical Scientist, Doctor, Healthtech Founder, Author, TV  
Host and currently CEO at Aspen Medical Indonesia



September 28, 2025

### Two Floods, One Disaster

Every storm now brings two floods: torrents of water and torrents of misinformation. During the monsoon rains that submerged communities in India and Pakistan in August 2025, social media brimmed with dramatic videos of trains vanishing under rivers, vans swept away, and clouds bursting like bombs. Many viewers shared and donated in good faith, assuming they were witnessing real rescue scenes.

Few realised they were watching an elaborate collage of AI-generated clips and recycled footage.

**“Every storm now brings two floods:  
torrents of water  
& torrents of misinformation.”**

... misrepresentation or misattribution of  
disasters ... slowing of information flow ...  
heightened panic about current conditions

... first responders waste  
precious resources investigating  
fictional emergencies ...

... solicitation of donations & funds that  
never reach those who are actually  
in need ...

scepticism delays action ...  
donors grow wary of giving to  
relief efforts, especially if  
compassion ends up being  
weaponised ....



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🏆

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🔊

Sounds

📱

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InDepth

Israel-Gaza war

War in Ukraine

Climate

UK

World

Business

Politics

Culture

BBC Verify

Verified video and satellite data shows impact of deadly Gaza floods

🕒 12 December 2025

Summary

- We're using **verified video** and **specialist satellite data** to see the extent of flooding in southern Gaza that the Hamas-run government media office says has killed at least 12 people
- Our verification team has **checked out a fire at an industrial site in Russia** - reports have said a munitions factory was set ablaze
- BBC Question Time discussed whether one in three children in Glasgow have English as a second language - **we've looked at the data**
- We use open-source intelligence, satellite imagery, fact-checking and data analysis to help report complex stories
- This feed is where we post our work throughout the day
- **Get in touch with us by following this link**

Live Reporting

Edited by Rob Corp

17:12 12 December

Claims of a record UK flu season and winter floods in Gaza

Thomas Copeland

BBC Verify Live journalist

🕒 17:12 12 December

👤 Thomas Copeland

BBC Verify Live journalist

We've verified footage from across the Gaza Strip where the Hamas-run government media office says at least 12 people have been killed in flooding.

We also used **radar analysis to measure the extent of the floods**, which followed a severe winter storm, and **debunked fake videos made with AI** that try to exploit the tragedy.

If you've followed our coverage of the civil war in Sudan, **you'll recognise this paramilitary commander who was identified by BBC Verify killing unarmed captives**. This morning the UK government announced they are sanctioning Al-Fateh Abdullah Idris. **Here's what you need to know.**

Plus, social media is full of viral videos claiming this year's UK flu season has hit harder than ever. **Watch this video to find out what's really going on.**

BBC Verify Live will be back on Monday but our verification and eyewitness teams are on duty across the weekend.

If you want to see more of BBC Verify's videos and catch up with our investigations and analysis **head to our pages on the BBC News website.**

Thomas Copeland

BBC Verify Live journalist

I've reported before on this page about AI-generated videos that claim to show **real victims of the conflicts in Gaza and Sudan.**

The accounts behind these videos will try to maximise engagement by posting about new developments that might emotionally resonate with people. Although we're seeing AI videos now about the flooding in Gaza we have also **verified genuine footage of what is happening there.**

One video in particular has spread widely across social media platforms. It claims to show a group of children in a tent as murky floodwater rises under them.

We've tracked the video back to a TikTok account where it has gathered more than 10 million views.TikTok has added an "AI-generated" label to this and many other videos posted by the account.

mirha\_binte\_gaza1

Mirha binte gaza

Follow

Message

🔗

🔄

⋮

2 Following

99.2K Followers

999.8K Likes

No bio yet.

Videos

13 Reposts

👍 Liked

🕒 2:11M

🕒 10:9M

🕒 1:1M

🕒 1:9M

🕒 4:41K

AI-GENERATED ⚠️




Image source: TikTok

BBC

All of the videos from the account are either 10 or 15 seconds long. Most publicly available text-to-video AI generators limit their output to this duration because the process of making them is still quite expensive.

Other hallmarks of AI-generation include some of the visual elements. The floodwater in this video has an unrealistic translucent quality as it moves and the girl in the pink top appears to have a third hand.

As AI video generators improve we are seeing fewer obvious red flags like these, but they can still be seen in output from accounts that are prioritising the number of videos posted over their individual quality.

14:39 12 December

Video captures dramatic landslide in Philippines

Shruti Menon  
BBC Verify senior journalist

🕒 14:39 12 December

👤 Shruti Menon

BBC Verify senior journalist

🕒 00:21

Verified video shows landslide in Philippines

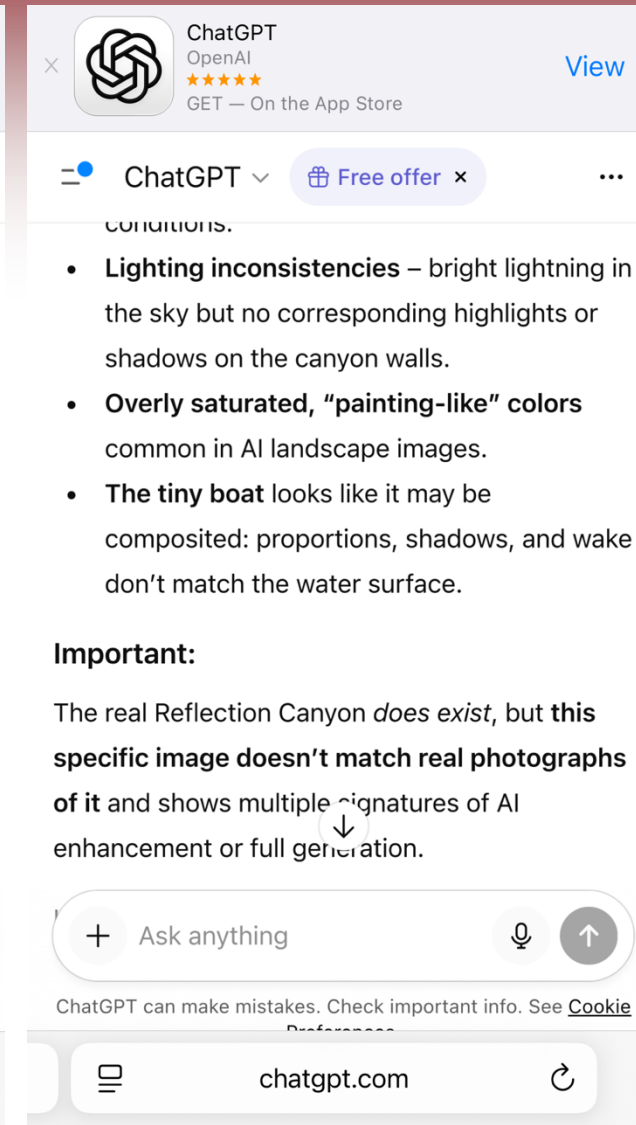
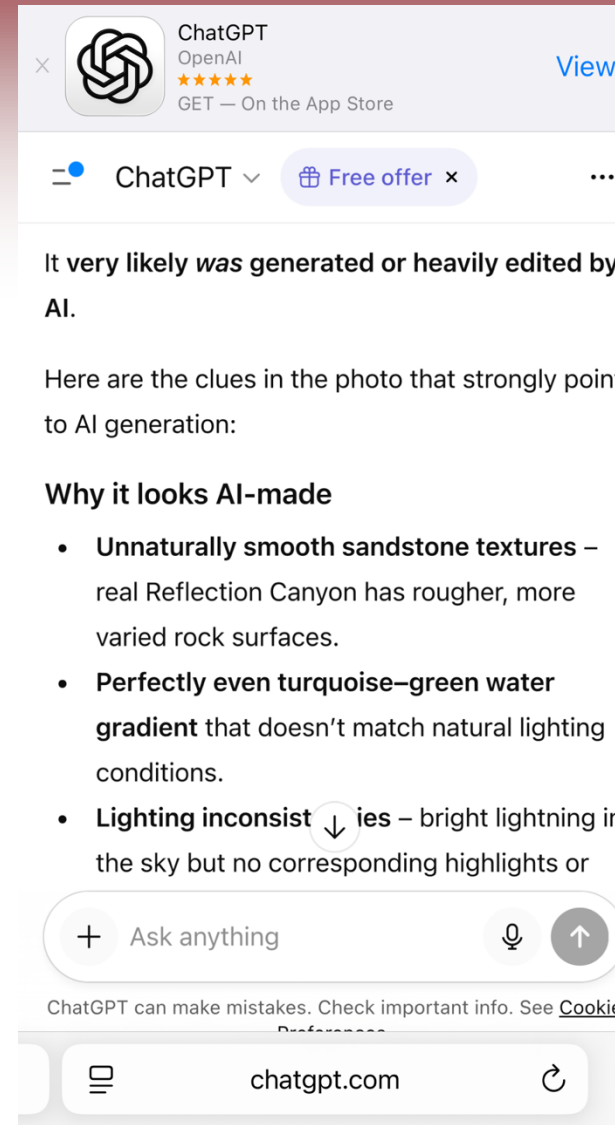
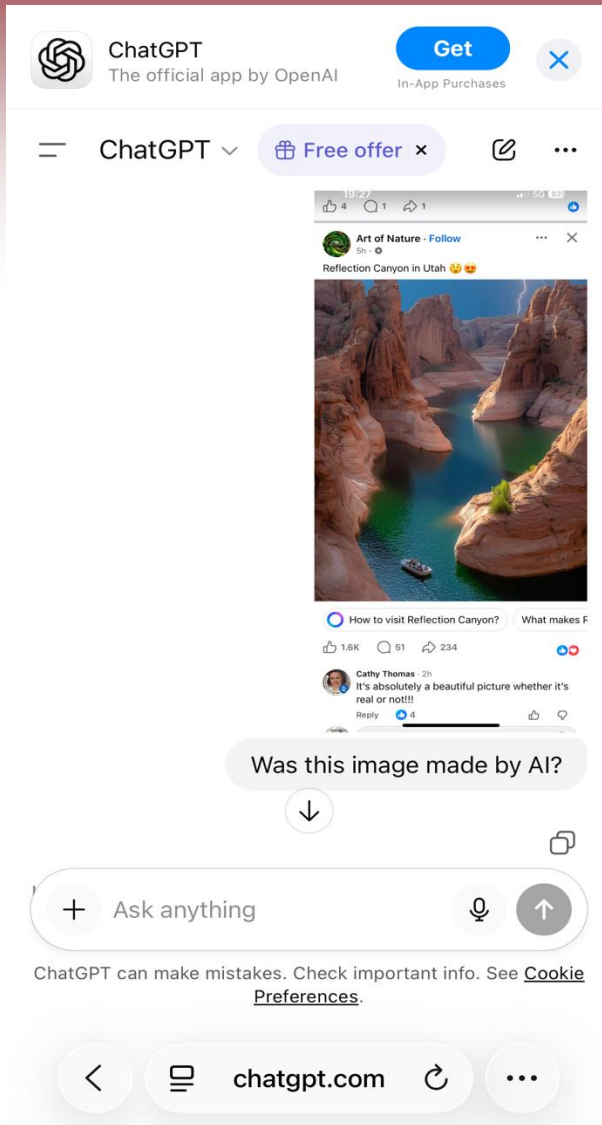
Video captures dramatic landslide in Philippines

A landslide in Talisay city in the Cebu province of Philippines was caught on camera showing a portion of a hillside collapsing onto a road, sending rocks and mud downward with force as motorists - some missing the fall by a few seconds - hurriedly turn around and leave the area.

Using Google Street View, I confirmed that the video was filmed on Cebu-Toledo Wharf road by matching distinctive road markings, vegetation patterns and nearby structures.

Images from the satellite firm Planet Labs from 10 and 12 December show the same curved road segment and a newly exposed patch of earth. This suggests there has been recent ground disturbance in the area where the landslide happened.

Reverse-image searching three freeze-frames suggests the video is new. No-one is reported to have died in the incident.





# AN A-Z OF CREATIVE TEACHING IN HIGHER EDUCATION

Sylvia Ashton  
and Rachel Stone

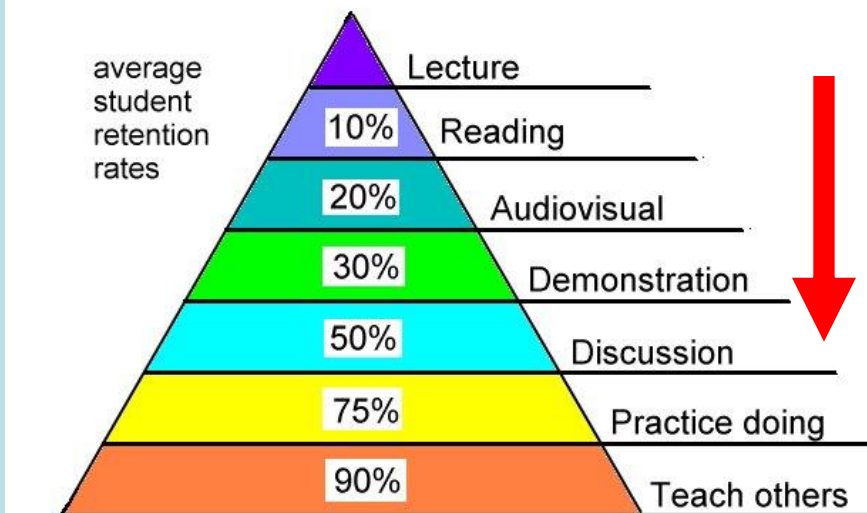


# BECOMING A CRITICAL THINKER

FOR YOUR UNIVERSITY STUDIES AND BEYOND

OXFORD

## Learning Pyramid



Source: National Training Laboratories, Bethel, Maine

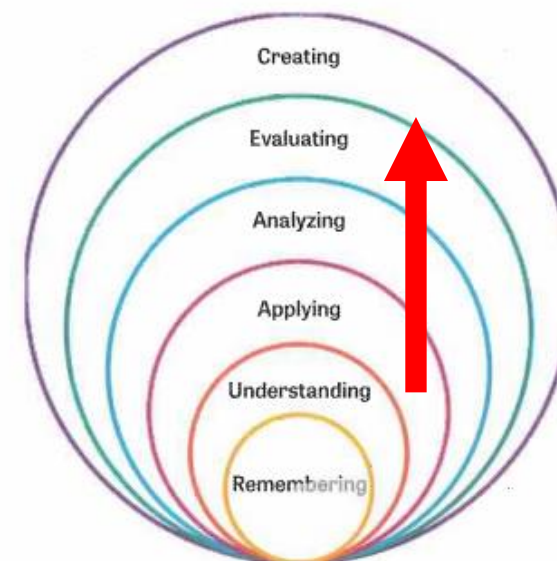


FIGURE 2.4 Bloom's Revised Taxonomy

Source: David R. Krathwohl (2002) 'A Revision of Bloom's Taxonomy: An Overview', *Theory Into Practice*, 41:4, 212-18

the dangers of AI for some learning & teaching activities are obvious ...  
but AI is here to stay

... so can we use AI creatively to enhance movement down the learning pyramid & develop higher level cognitive skills?

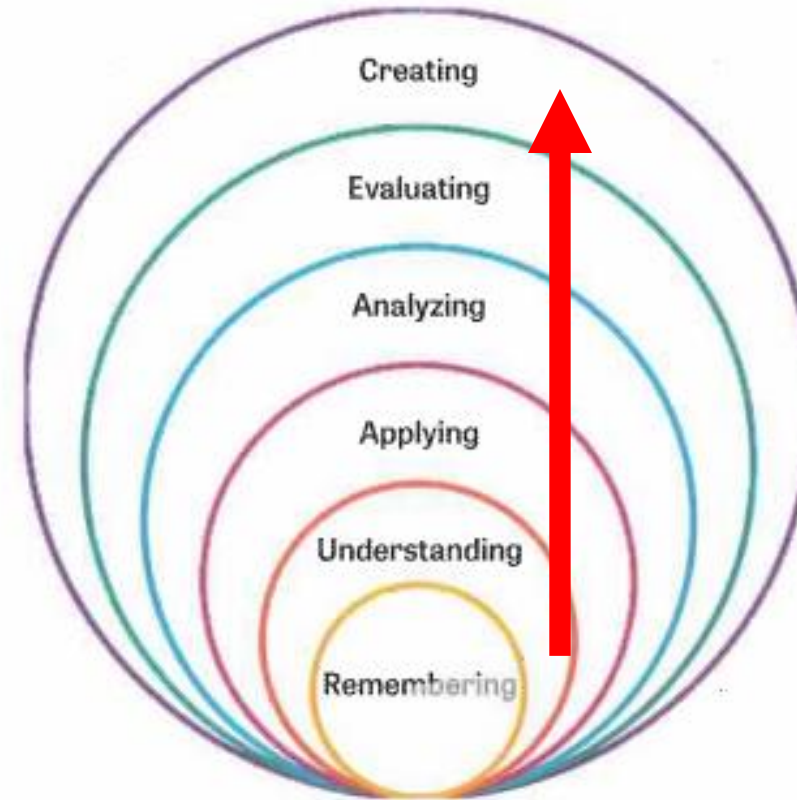
how can we best develop critical thinking using AI ('critical AI literacy'\*)?

\*see recent QAA guidance ....

facts & examples  
(= remembering)

processes & forms  
(= understanding/applying/analysing)

interpretation & significance  
(= evaluating/creating)



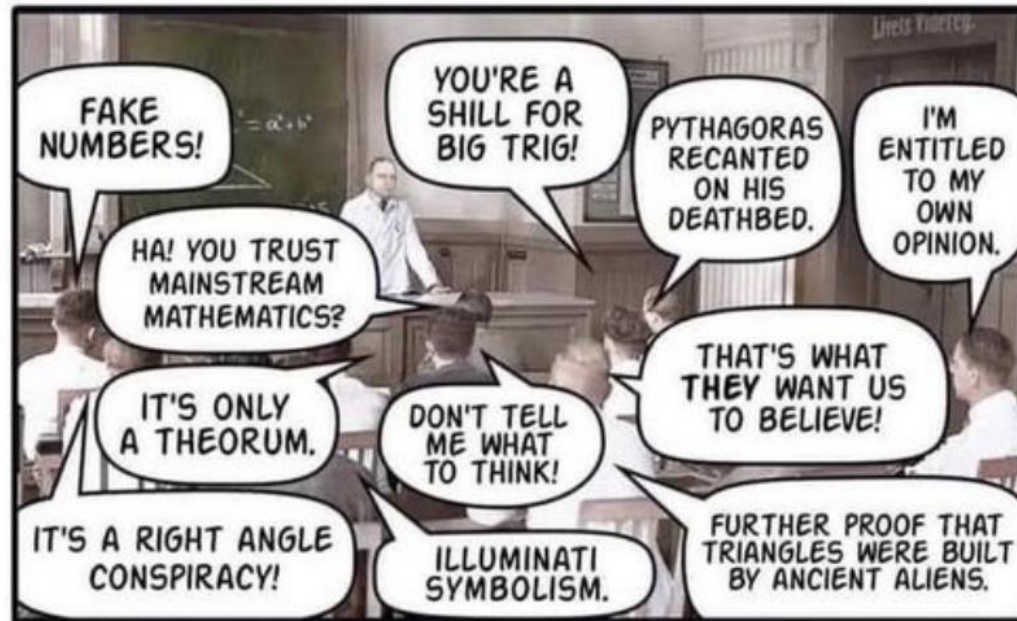
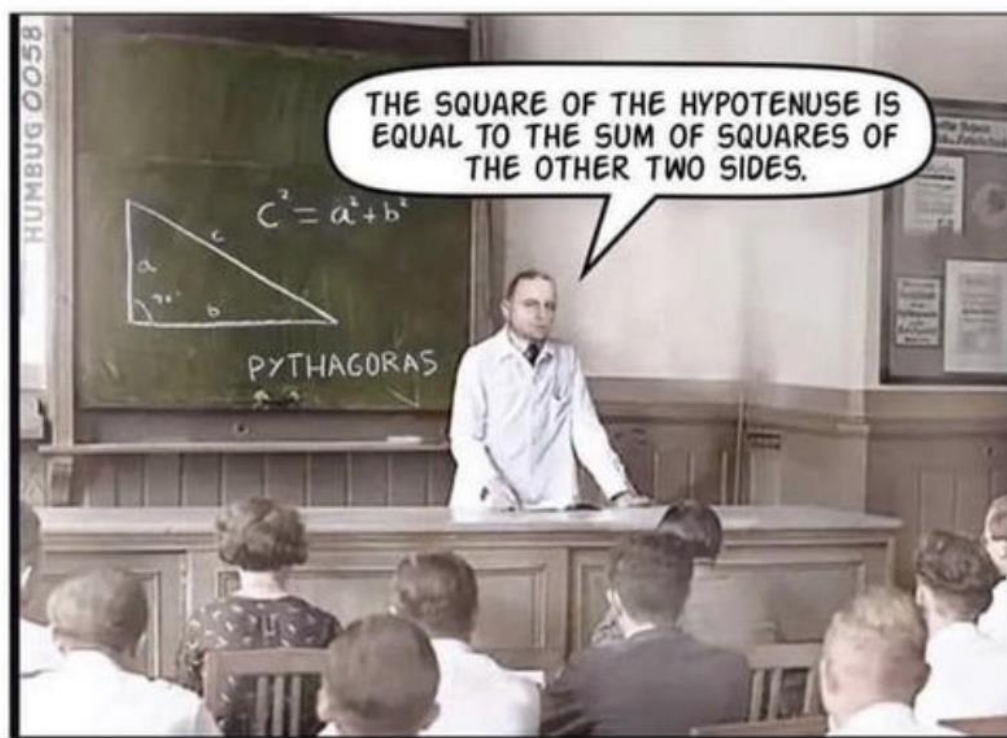
**FIGURE 2.4** Bloom's Revised Taxonomy

Source: David R. Krathwohl (2002) 'A Revision of Bloom's Taxonomy: An Overview', *Theory Into Practice*, 41:4, 212-18

**can these lessons apply to other subjects/disciplines?**



we are at a critical  
juncture regarding the  
relative volumes of  
reliable information,  
misinformation &  
disinformation



Questions?  
Comments?  
Ideas?

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