

the case
for logic
14 nov
2022

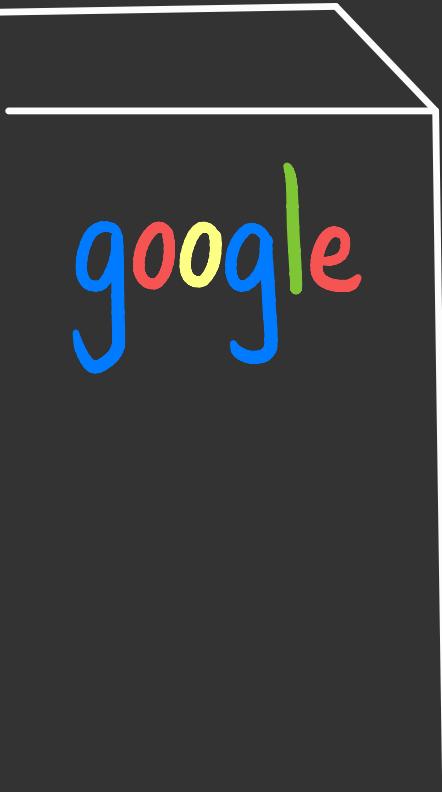
CSCI
373

what is the longest
day of the year?



what is the longest day of the year

to google!

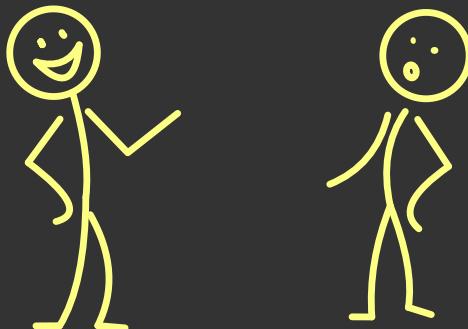


google

one sec

in australia, what
is the longest day
of the year

?



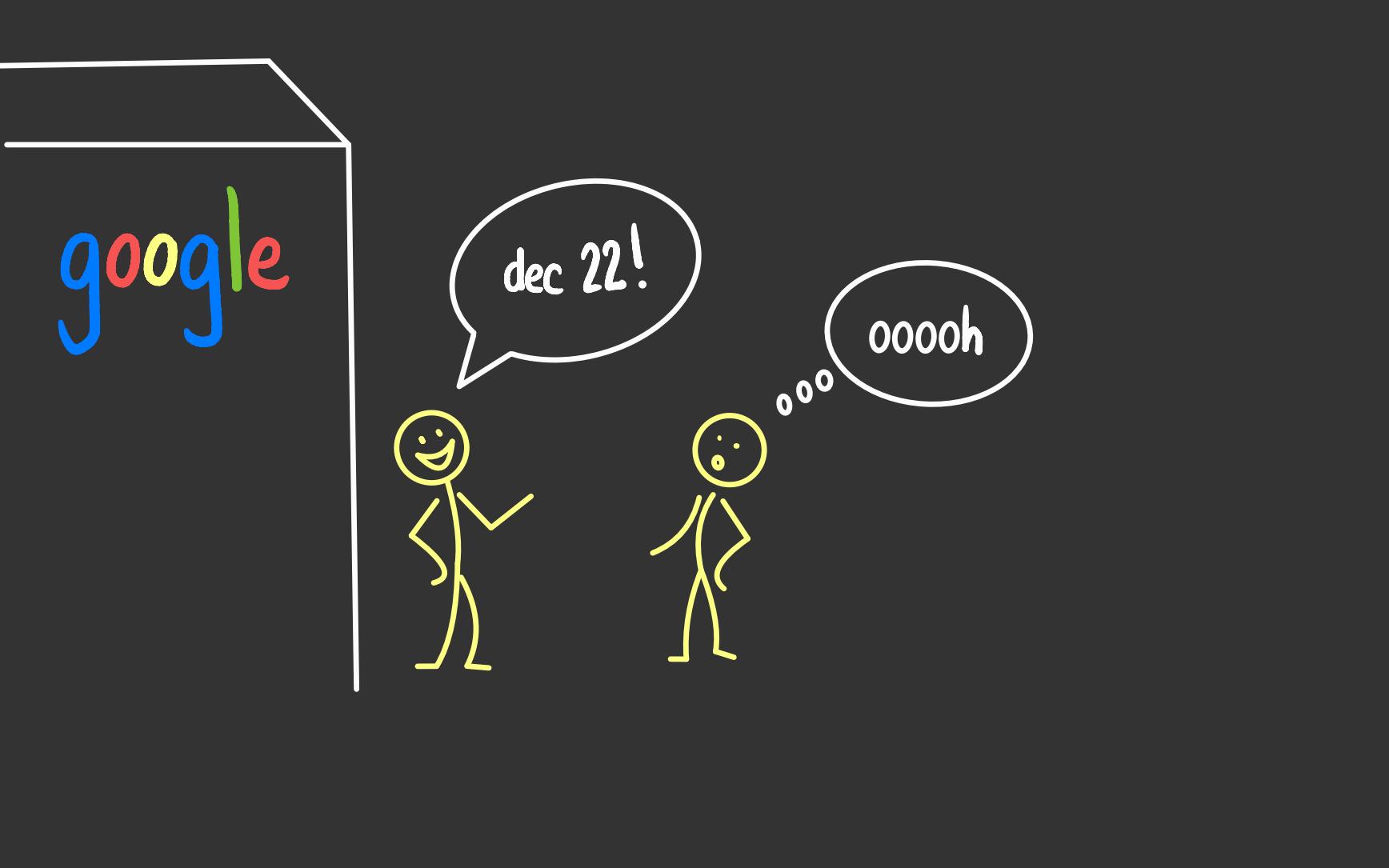
armenia - june 21

australia - dec 22

austria - june 21

google

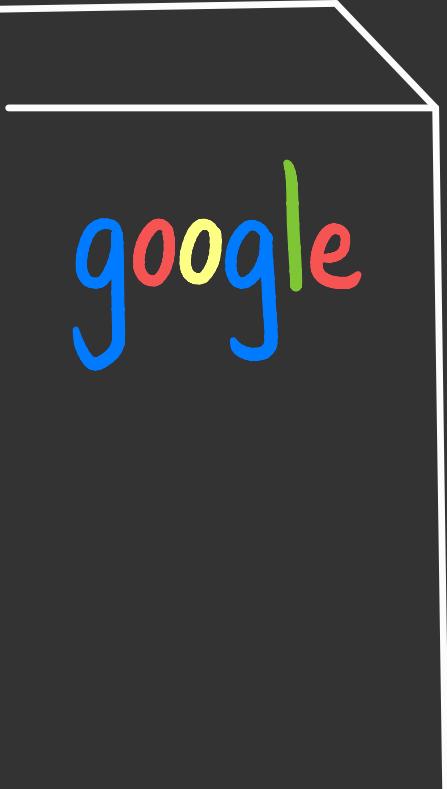




google

dec 22!

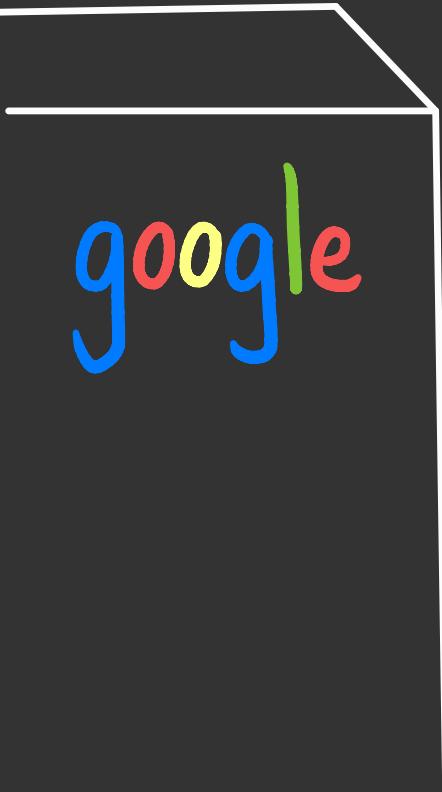
oooooh



google



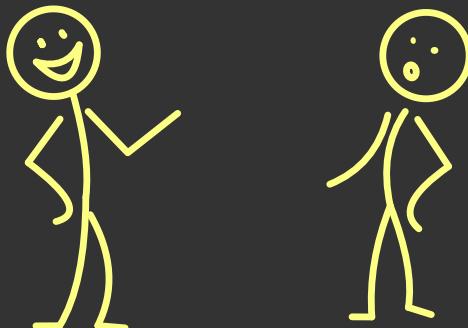
in patagonia, what
is the longest day
of the year ?



google

one sec

in patagonia, what
is the longest day
of the year ?



armenia - june 21

australia - dec 22

austria - june 21

google



armenia - june 21

australia - dec 22

austria - june 21

google

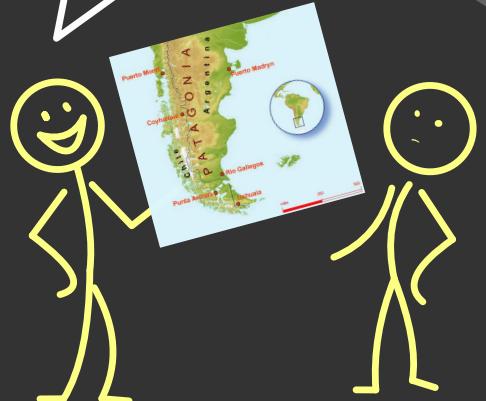


google

it's a region
of argentina!

in patagonia, what
is the longest day
of the year

?



google

and a clothing
brand!!

it's a region
of argentina!

in patagonia, what
is the longest day
of the year

?



longest day in

northern hemisphere : june 21

southern hemisphere : dec 22

region

paraiba

patagonia

pennsylvania

country

brazil

argentina

usa

country

argentina

armenia

australia

hemisphere

south

north

south

google



longest day in

northern hemisphere : june 21

southern hemisphere : dec 22

region

paraiba

patagonia

pennsylvania

country

brazil

argentina

usa

country

argentina

armenia

australia

hemisphere

south

north

south

google



if patagonia is in argentina
and argentina is in the
southern hemisphere, then
patagonia is in the
southern hemisphere

longest day in

northern hemisphere : june 21

southern hemisphere : dec 22

region

paraiba

patagonia

pennsylvania

country

brazil

argentina

usa

country

argentina

armenia

australia

hemisphere

south

north

south

google



if patagonia is in argentina
and argentina is in the
southern hemisphere, then
patagonia is in the
southern hemisphere

if patagonia is in the
southern hemisphere and
the longest day in the
southern hemisphere is
dec 22, then the longest
day in patagonia is dec 22

longest day in

northern hemisphere : june 21

southern hemisphere : dec 22

region

paraiba

patagonia

pennsylvania

country

brazil

argentina

usa

country

argentina

armenia

australia

hemisphere

south

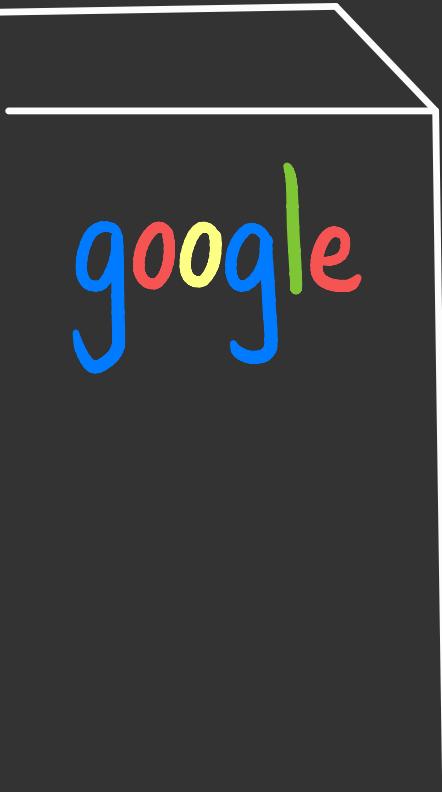
north

south

google



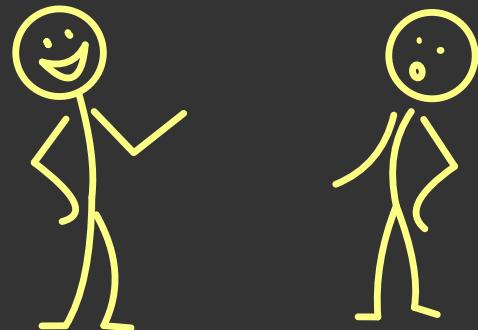
so the longest day in
patagonia is dec 22



google

dec 22!

oooooh



adnan darwiche

human-level intelligence or animal-like abilities?

communications of the acm

2017

8 The Power of Success

Before I comment on policy considerations, let me highlight a relevant phenomena that recurs in the history of science, with AI being no exception. I will call this the *bullied-by-success* phenomena, in reference to the subduing of a community into mainly pursuing what is currently successful, at the expense of pursuing enough what may be more successful or needed on the longer term.¹¹

Going back to history, some of the perspectives promoted during the expert systems era can be safely characterized today as having been scientifically absurd (see, for example, Footnote 10). Yet, due to the perceived success of expert systems then, these perspectives had a dominating effect on the course of scientific dialogue and direction, leading to a bullied-by-success community.¹² I saw a similar phenomena during the transition from logic-based approaches to probability-based approaches for commonsense reasoning (late 1980s). Popular arguments then, like “people don’t reason probabilistically,” which I believe carries merit, were completely silenced when probabilistic approaches started solving commonsense reasoning problems that have defied logical approaches for more than a decade. The bullied-by-success community then made even far more reaching choices in this case as symbolic logic almost disappeared from the AI curricula. Departments that were viewed as world centers for representing and reasoning with symbolic logic barely offered any logic courses as a result. Now we are paying the price. Not realizing that probabilistic reasoning attributes numbers to Boolean propositions in the first place, and that logic was at the heart of probabilistic reasoning except in its most simple forms, we now have come to the conclusion that we need to attribute probabilities to more complex Boolean propositions and even to first-order sentences. The resulting frameworks are referred to as first-order probabilistic models or relational probabilistic models and there is a great need for skill in symbolic logic to advance these formalisms. The only problem is that this skill has almost vanished from within the AI community, leading to treatments that appear naive compared to what early AI researchers may have been capable of accomplishing.¹³

The blame for this phenomena cannot be assigned to any particular party. It is natural for the successful to overjoy and sometimes also inflate success. It is expected that industry will exploit success in ways that may redefine the employment market and influence the academic interests of graduate students. It is also understandable that the rest of the academic community may play along to maintain its survival (win a grant, get a paper in, attract a student). While each of these behaviors seem rational locally, their combination can sometimes be harmful to scientific inquiry and hence irrational globally. Beyond raising awareness about this recurring phenomena, which can by itself go a long way, decision makers at the governmental and academic levels bear a particular responsibility towards mitigating its negative effects. Senior members of the academic community also bear the responsibility of putting current developments in historical perspective, to empower junior researchers in pursuing their genuine academic interests instead of just yielding to current successes.¹⁴