



New Challenges to International Cooperation: Automation and Climate Change

Carlos Felipe Balcazar

MacMillan Center

August, 2023

About the class

- ▶ Instructor
 - ▶ You can call me Felipe.
 - ▶ E-mail: carlos.balcazar@yale.edu
 - ▶ Office hours: Thu. 10.00 - 11.30; 3.00 - 4.30, RKZ 248
 - ▶ My goal: To help you becoming better professionals and scientists.

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Why automation and climate?

Two defining challenges of our lifetimes

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 - ▶ Progresses at an exponential rate, threatening workers' livelihoods. 
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 - ▶ Emboldens ethnic politics and anti-immigration policies.
 - ▶ Fuels populism!

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- ▶ **How can we compensate the losers from automation?**

Embedded liberalism

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- ▶ Could it exacerbate inter-state war? 

Using your “IPE hat” for this class and for the future

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Think about incentives and conditions

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- ▶ How can we understand international cooperation? (knowledge!)
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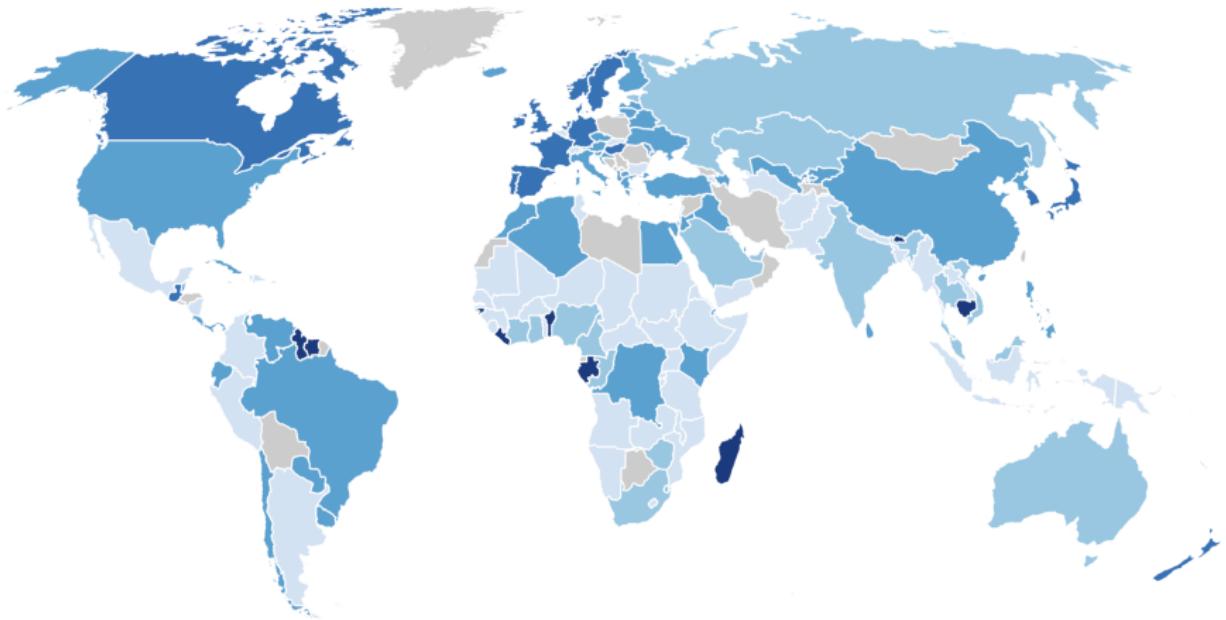
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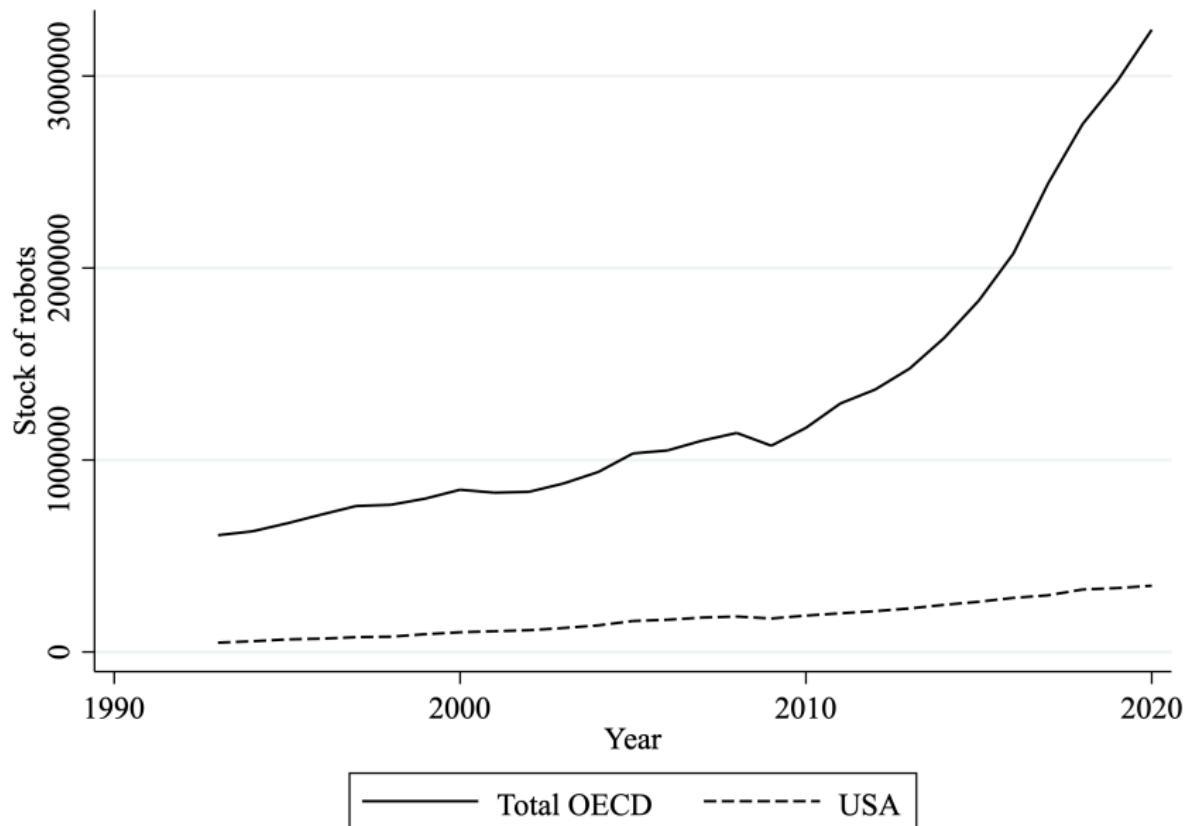
State of net zero targets

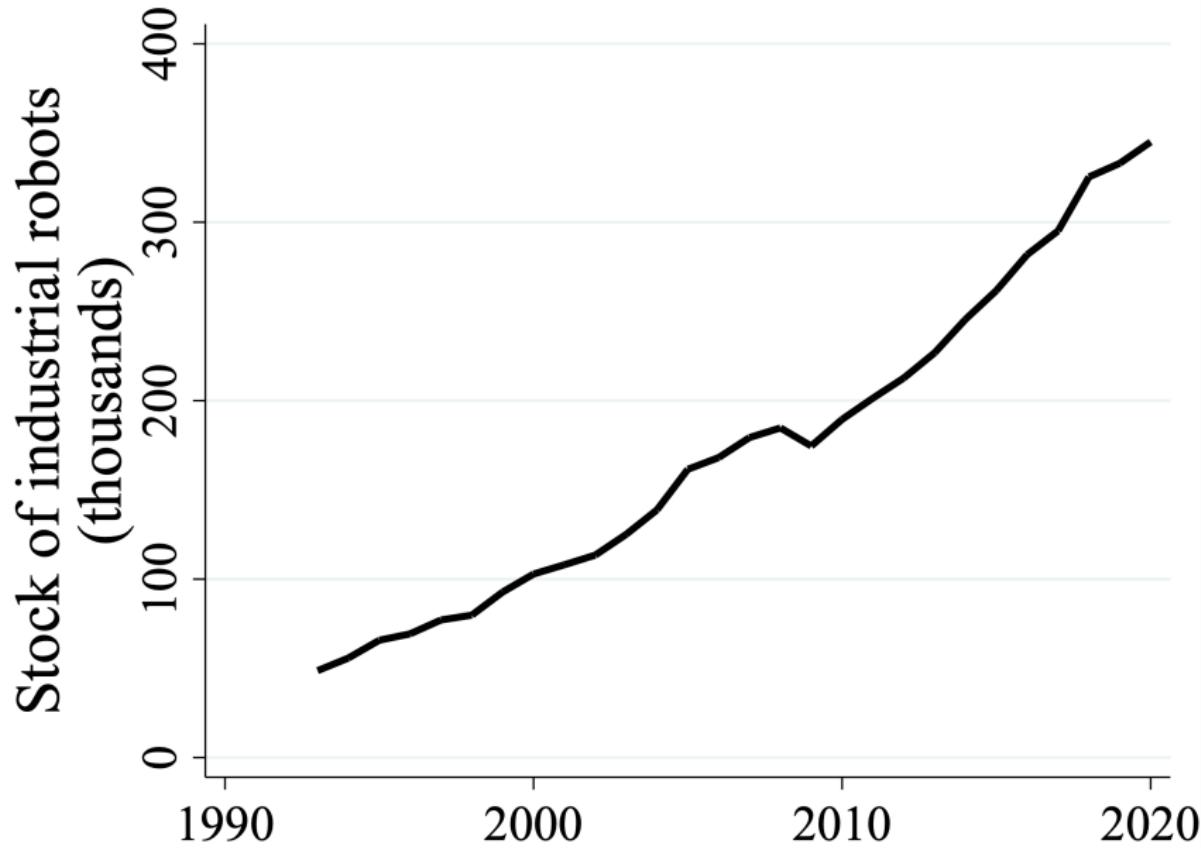
- | | |
|----------------------------|----------------------------|
| ■ Achieved (self-declared) | ■ Declaration / pledge |
| ■ In law | ■ Proposed / in discussion |
| ■ In policy document | ■ No data |

Source: Net Zero Tracker



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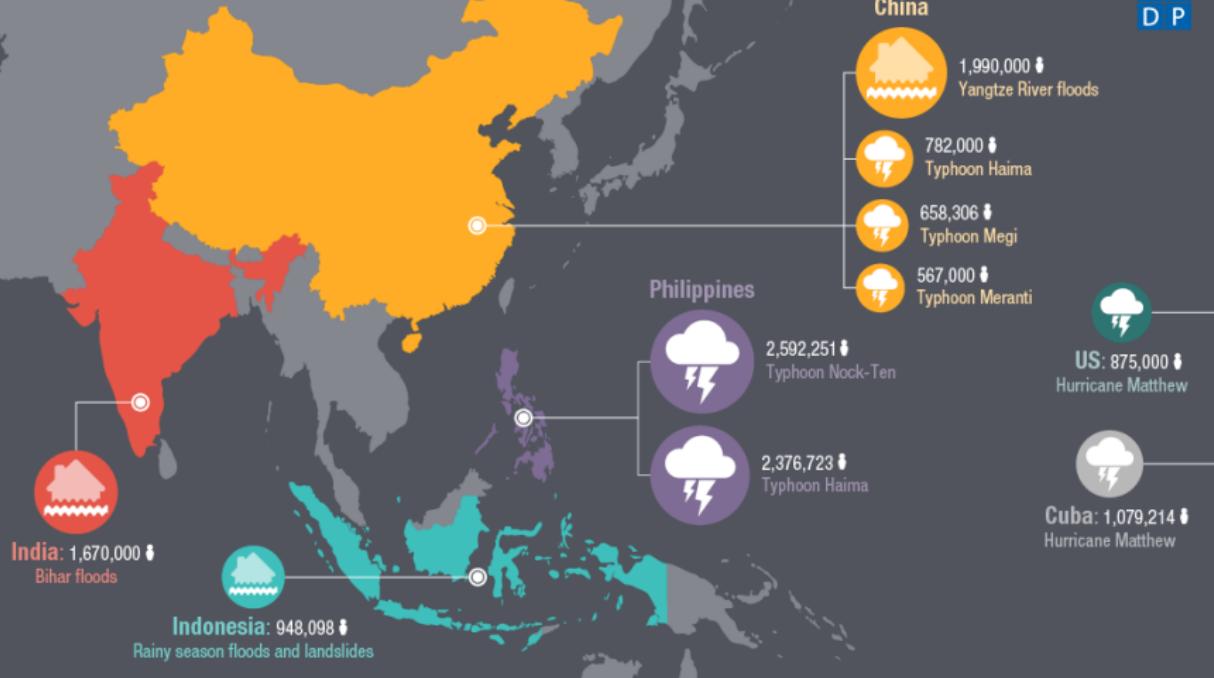


Automation risk and votes to leave the EU



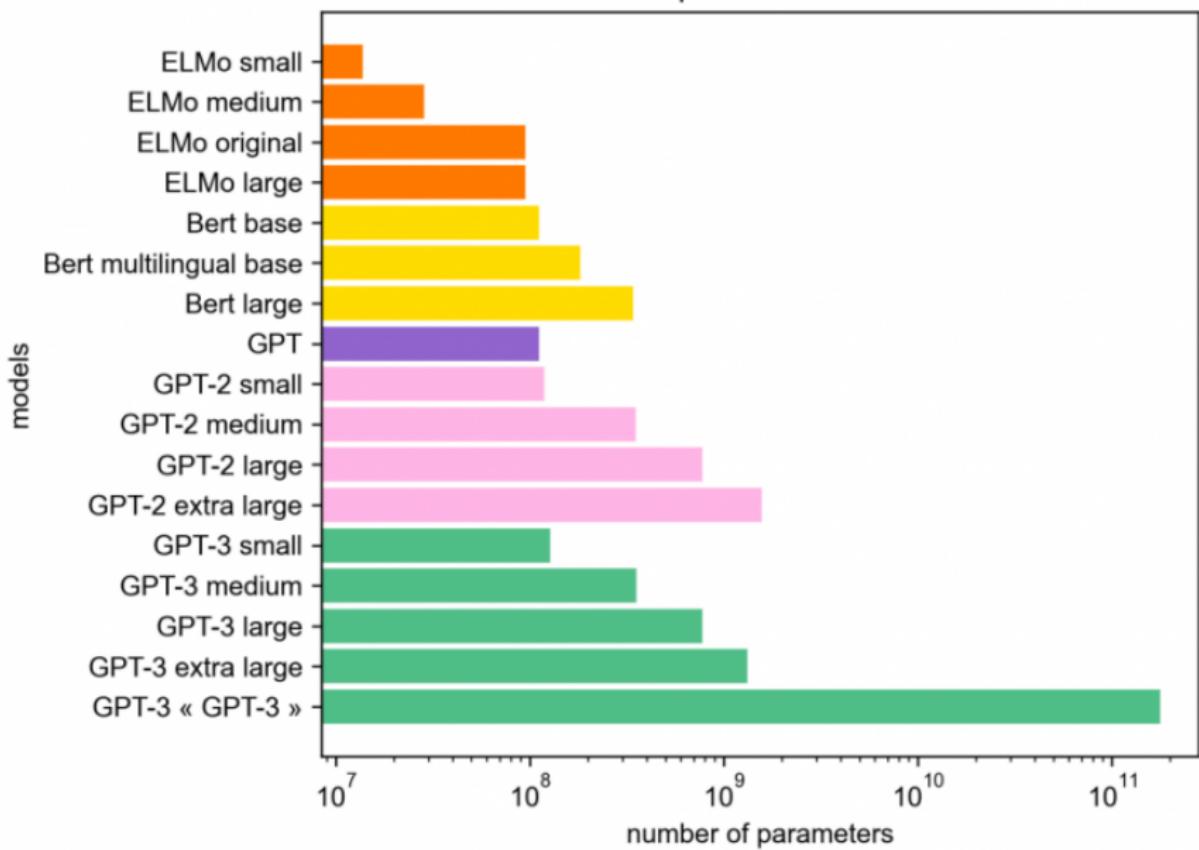
Quartz | qz.com | Data: Institute for the Future of Work | Note: Automation risk uses ONS methodology and data from 2017.

THE 10 LARGEST DISPLACEMENT EVENTS OF 2016
WERE CLIMATE-RELATED



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parameters



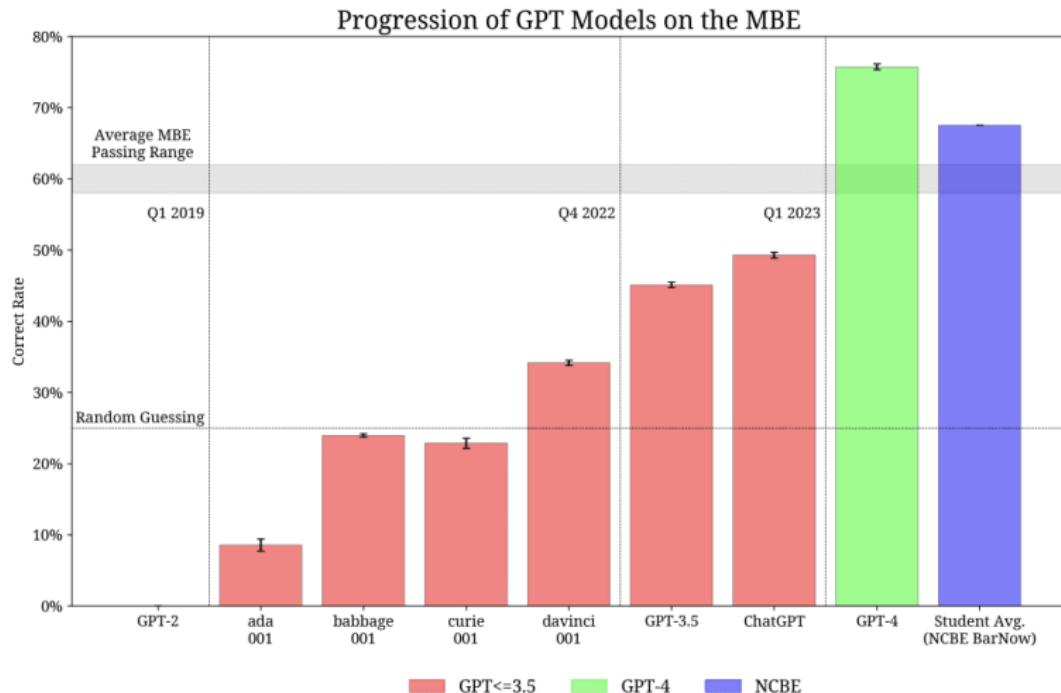


Figure 1. Progression of Recent GPT Models on the Multistate Bar Exam (MBE)

Exam results (ordered by GPT 3.5 performance)

Estimated percentile lower bound (among test takers)

100% –

80% –

60% –

40% –

20% –

0% –

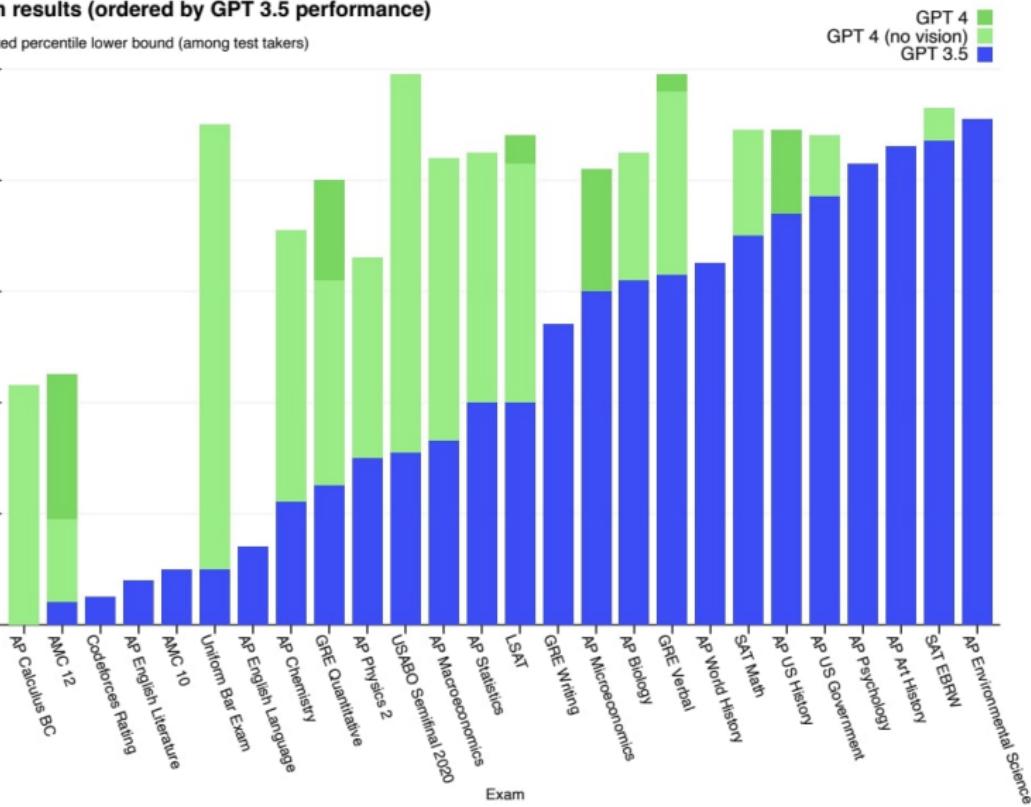
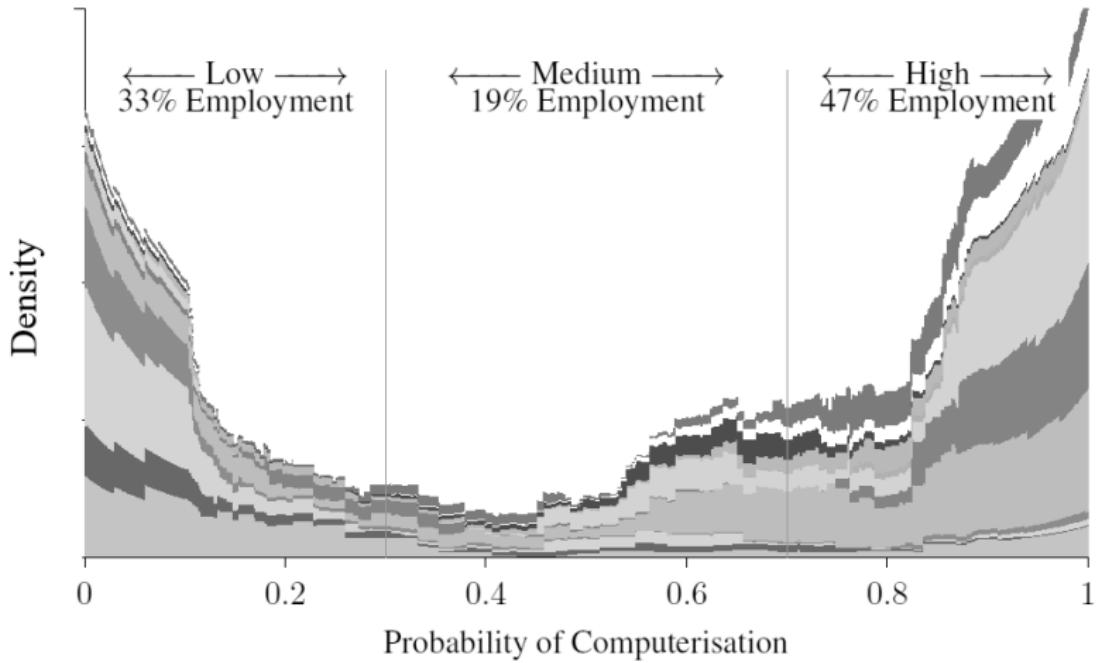
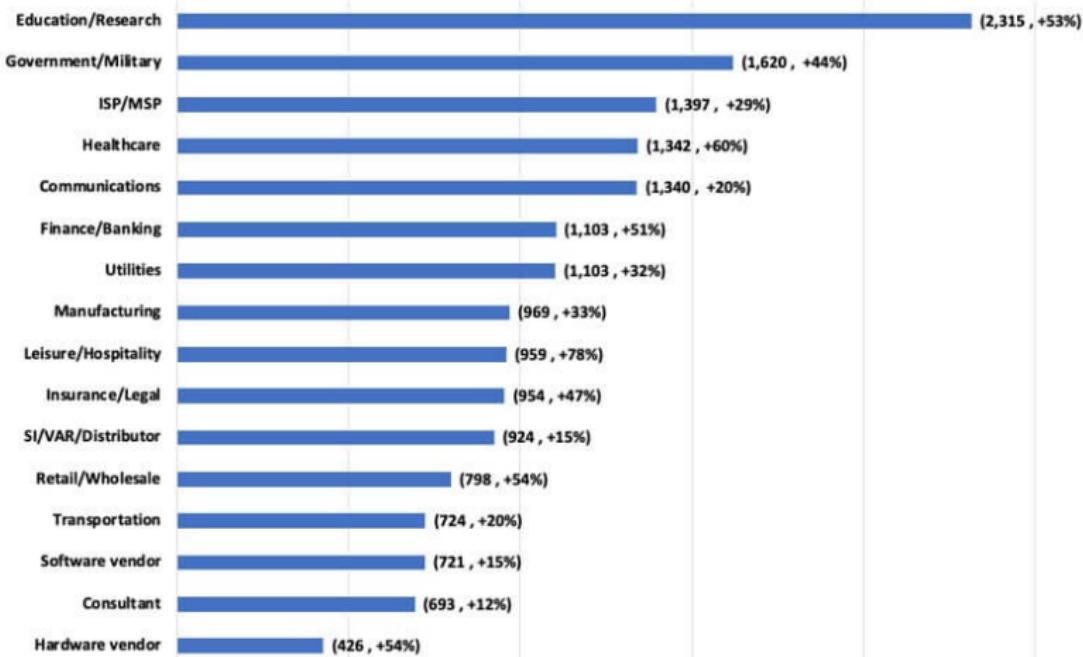


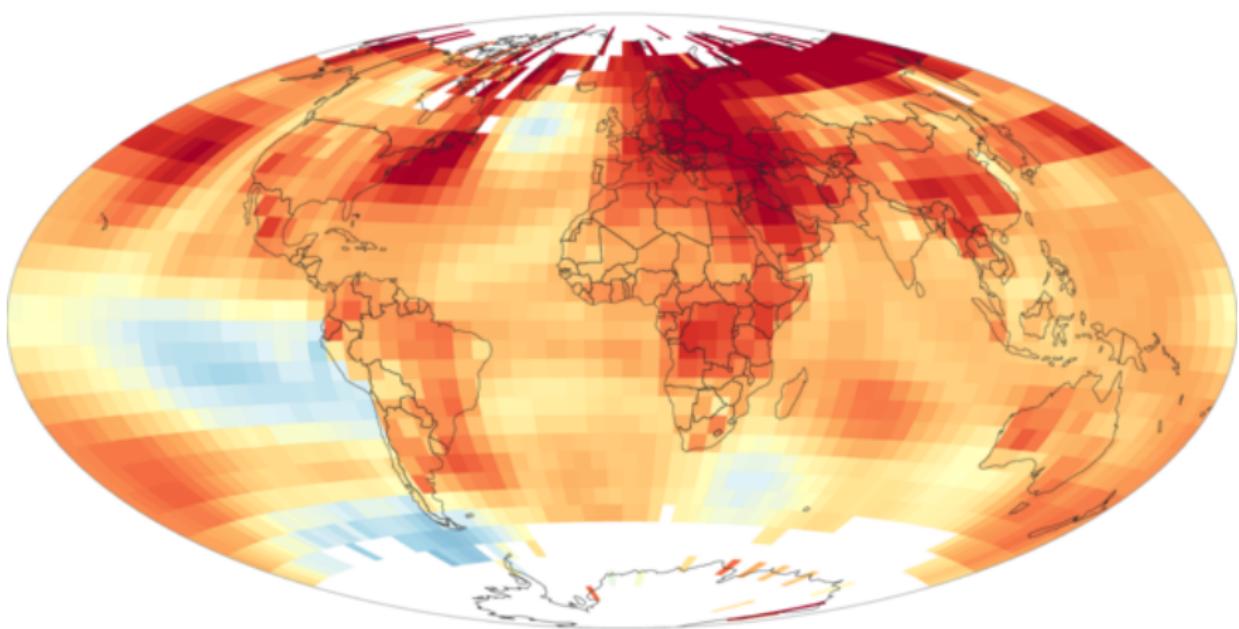
Figure 4. GPT performance on academic and professional exams. In each case, we simulate the conditions and scoring of the real exam. Exams are ordered from low to high based on GPT-3.5 performance. GPT 4 outperforms GPT 3.5 on most exams tested. To be conservative, we report the



Average Weekly Attacks per organization by Industry – Global Q2 2022 and YoY change



RECENT TEMPERATURE TRENDS (1993-2022)



1993–2022

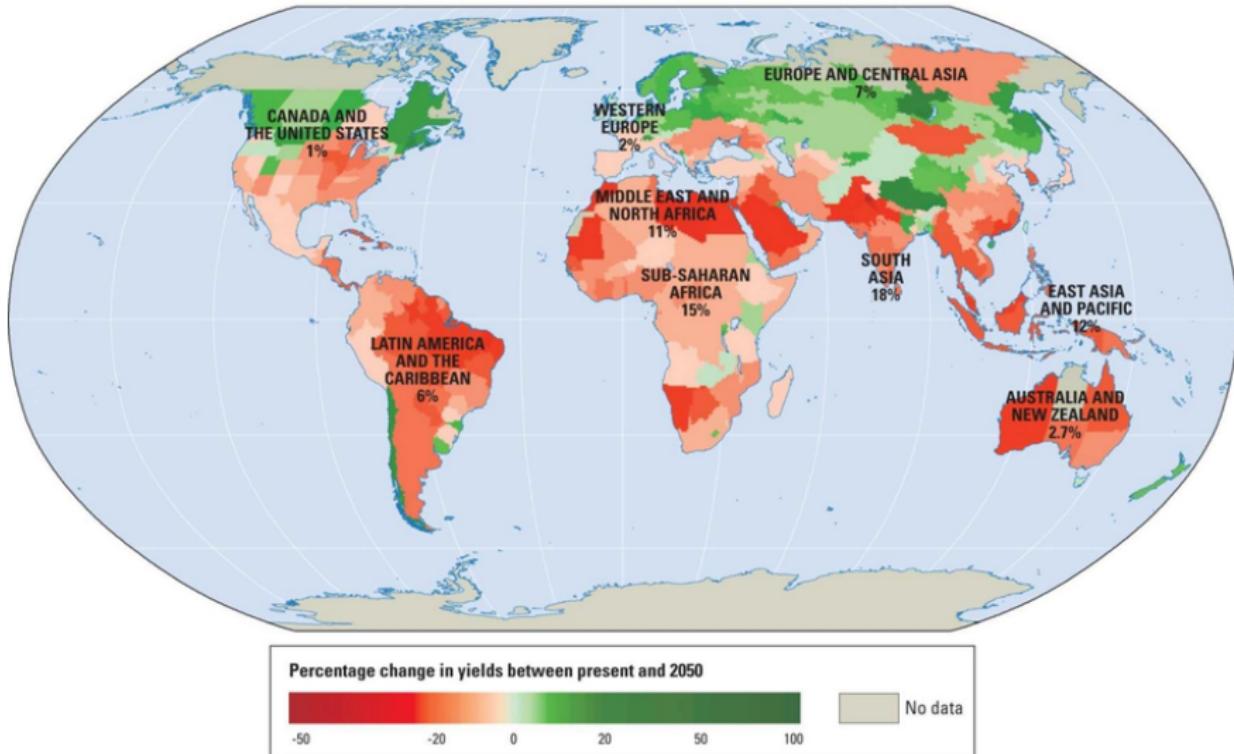
Change in temperature ($^{\circ}\text{F}/\text{decade}$)



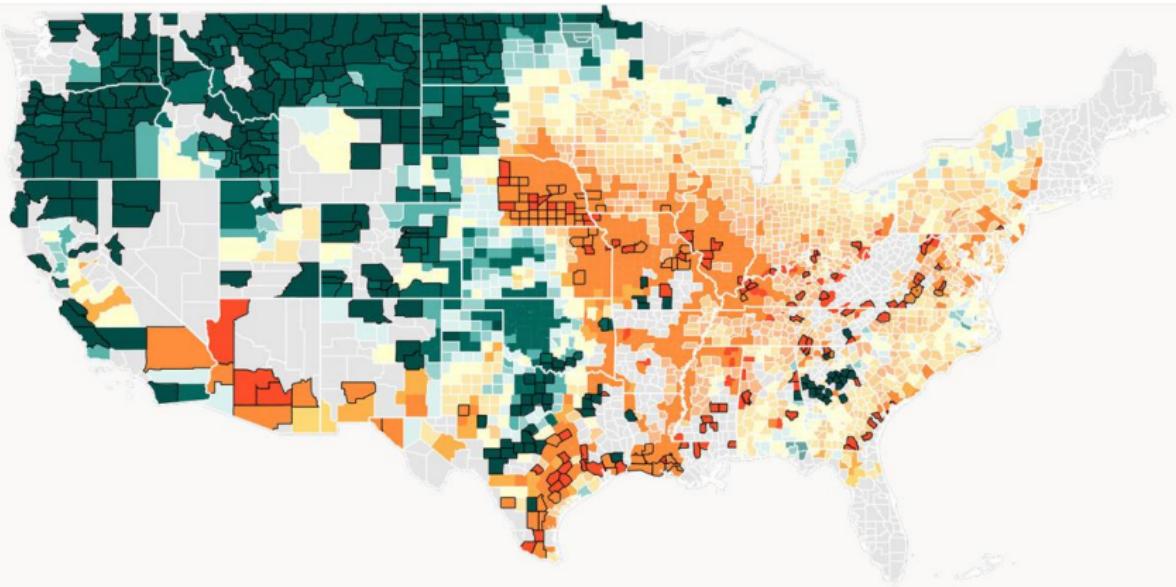
NOAA Climate.gov

Data: NCEI

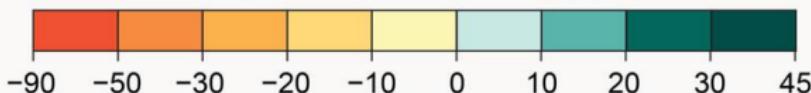
Map 1 Climate change will depress agricultural yields in most countries in 2050, given current agricultural practices and crop varieties



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Agricultural Yields (% change)





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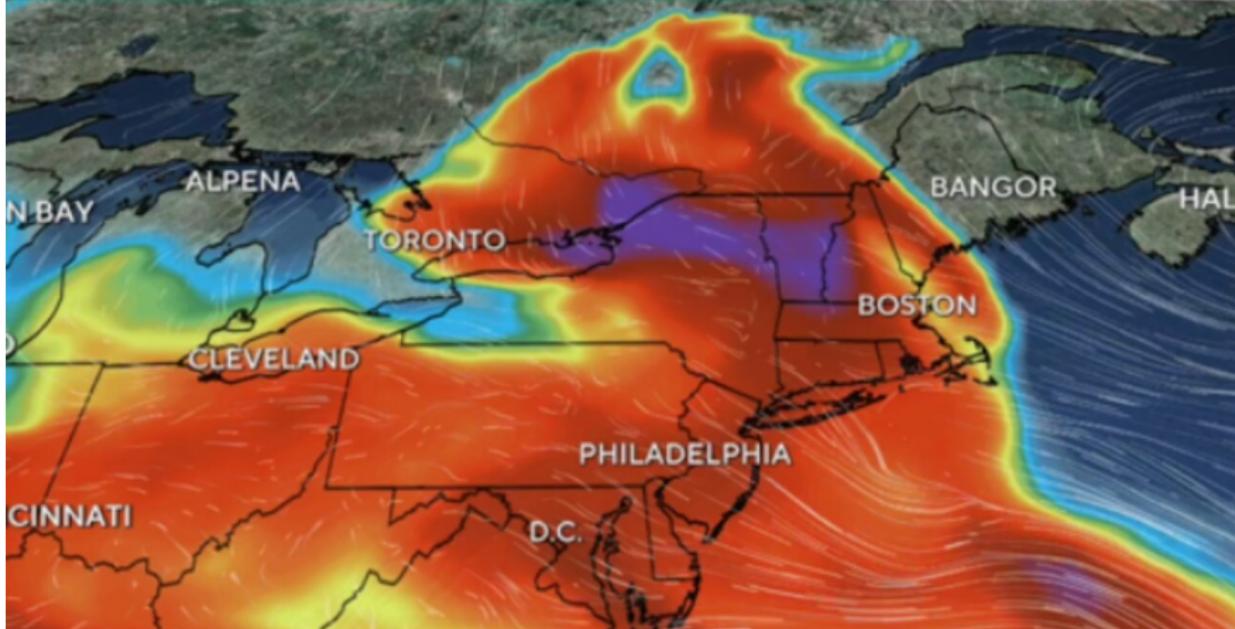


Canadian wildfires burning land at record pace

WILDFIRE SMOKE

TUESDAY 7:30 AM

NEXT WEATHER



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VERNON PRATER

Prior Offenses
2 armed robberies, 1 attempted armed robbery

Subsequent Offenses
1 grand theft

LOW RISK

3

BRISHA BORDEN

Prior Offenses
4 juvenile misdemeanors

Subsequent Offenses
None

HIGH RISK

8



DYLAN FUGETT

LOW RISK

3



BERNARD PARKER

HIGH RISK

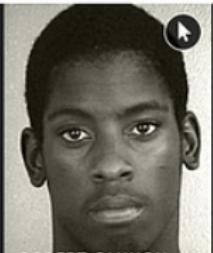
10



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LOW RISK

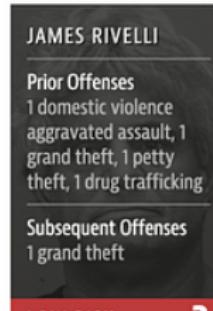
3



ROBERT CANNON

MEDIUM RISK

6



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