

Questões

Questão 1 - Leia o trecho (linhas 07 - 11) do Texto 1:

“While several sectors, including criminal justice, medicine, and even business, use AI recommendations, humans are typically the final decision-makers. The researchers took this into account by comparing criminal bail decisions made by a single judge with recommendations generated by an AI system. Specifically analyzed was AI’s influence on whether cash bail should be imposed.”

Marque uma alternativa correta sugerida no trecho acima (linhas 07-11)

- a. Vários setores, incluindo a justiça criminal, entre outros, utilizam recomendações de IA, a qual é responsável mesmo pelas decisões finais.
- b. Os pesquisadores não levaram em consideração as decisões da IA ao comparar as decisões de fiança criminal tomadas por um único juiz.
- c. A pesquisa comparou as recomendações do sistema de IA com as decisões de um juiz no que diz respeito à fiança criminal.
- d. Diversas decisões tomadas por juízes foram comparadas com as recomendações do sistema de IA, incluindo decisões de fiança criminal.

Questão 2 - Leia o trecho (linhas 18 - 27) do Texto 1:

“Results showed that AI alone performed worse than the judge in predicting reoffenders — in this case, by imposing the tighter restriction of cash bail. At the same time, little to no difference was found between the accuracy of human-alone and AI-assisted decision-making. The judge went against AI recommendations in slightly more than 30 percent of cases.

“I was surprised by this,” Greiner said. “Given the evidence that we’ve cited that algorithms can sometimes outperform human decisions, it looked as though what happened is that this algorithm had been set to be too harsh. It was over-predicting

that the arrestees would misbehave, predicting that they would do so too often, and, therefore, recommending measures that were too harsh.”

Marque uma alternativa correta sugerida no trecho acima (linhas 18-27)

- a. Uma grande diferença encontrada foi entre a precisão da tomada de decisão por humanos e a tomada de decisão assistida por IA. O juiz foi contra as recomendações da IA na maioria dos casos.
- b. Na previsão de infratores reincidentes, a IA não impôs uma restrição da fiança em dinheiro mais leve do que o próprio juiz.
- c. Apesar da restrição mais rigorosa de fiança em dinheiro proposta pela IA, ela previu que os presos não iriam comportar-se mal e não recomendou medidas drásticas.
- d. O juiz estava de acordo e repetindo as decisões e recomendações da IA em mais de 30% dos casos.

Questão 3. No Texto 1 sobre A Inteligência Artificial (IA) ajuda os humanos a tomarem melhores decisões? Qual o significado mais adequado para a expressão “set their sights” (linha 15)?

“The researchers — led by Imai and Jim Greiner, the Honorable S. William Green Professor of Public Law at Harvard Law School — set their sights on hearings held by a single judge over a 30-month period” (linha 15).

- a. Definiram suas visões
- b. Procuraram
- c. Definiram como objetivo
- d. Descobriram

Questão 4 - Analise as afirmações sobre o Texto 1. Quais estão CORRETAS?

I - Deve-se analisar criticamente as decisões baseadas em Inteligência Artificial e também as feitas por seres humanos.

II - Na pesquisa apresentada no Texto 1, as decisões judiciais baseadas em Inteligência Artificial superaram as decisões dos juízes em 30% dos casos.

III - Para os pesquisadores, ajustar os algoritmos que influenciam as sugestões da Inteligência Artificial é mais fácil que entender ou modificar as decisões tomadas por pessoas.

IV - As decisões tomadas pela Inteligência Artificial levaram em consideração diversos fatores, entre eles a idade, raça e antecedentes criminais dos detidos.

- a. I, II e IV estão corretas.
- b. I e III estão corretas.
- c. I e IV estão corretas.
- d. Apenas a III está correta.

Questão 5 - Qual a principal conclusão do Texto 1?

- a. A Inteligência Artificial é uma ferramenta eficaz para auxiliar os juízes em suas decisões.
- b. A Inteligência Artificial tende a errar menos que os juízes quanto a recorrências de crimes.
- c. Tanto decisões feitas por Inteligência Artificial quanto por humanos devem ser analisadas, pois ambas podem ser parciais.
- d. Os juízes tendem a ser mais rigorosos em seus julgamentos e nas punições, comparado com as decisões feitas por Inteligência Artificial.

Questão 6 - Leia o trecho (linhas 24 a 36) do Texto 2:

We need to find a way to rebalance the food system. And to do that, researchers are turning to what we might learn from how other species navigate the complexity of natural food systems — ecosystems — and how these findings apply to our own species. For example, in their research on our closest living cousins in the wild — other primate species — they found that owing to natural ecological fluctuations (such as the changing seasons) primates are regularly stuck in imbalanced food environments that prevent them from eating a balanced diet. In such circumstances, most primates prioritise their intake of protein more strongly than the two other macronutrients we need — fat and carbohydrates. In other words, their appetites regulate their intake of protein more strongly than fat and carbohydrates, and as a result on low protein diets they will overeat fat and carbohydrates, and on high protein diets they will undereat fat and carbohydrates. Humans also show protein prioritisation, so we're no different to other primate species in that respect.

Sobre o trecho acima (linhas 24 a 36), marque UMA alternativa correta:

- a. De acordo com os cientistas, devido ao fato de os primatas acabarem confinados em um ambiente de comida não-balanceada, eles priorizam mais o consumo de proteínas.
 - b. Mesmo quando os primatas têm uma dieta baixa em proteínas, eles não aumentam o consumo de gordura e carboidratos.
 - c. As flutuações ecológicas, como as mudanças de estações do ano auxiliam na dieta de macronutrientes dos primatas.
 - d. Todas as alternativas estão corretas.
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Questão 7 - Leia o trecho (linhas 1 a 13) do Texto 2:

You may have more in common with cockroaches than you realise.

In an experiment, researchers first manipulated cockroach diets so they were either being fed exclusively a high protein, high carbohydrate, or a near-balanced food — putting them in different states of nutritional imbalance. Then they were given access to all three foods, enabling them to mix whatever diet they wished. Amazingly, all three groups of cockroaches selected just the right combination of the three foods to rebalance their diets, and then continued to eat according to that ratio. What this tells us is that cockroaches — and the 40 or so other animal species the researchers have studied — have not just a single appetite, they have appetites that make them hungry for specific nutrients depending on what they need at a given time. And interestingly, humans have these nutrient-specific appetites too. It's insights like this gleaned from the natural world that are helping us better understand why we overeat and how imbalances in our modern food system are contributing to the problem.

Leia as afirmações:

- I - No experimento feito com baratas, todas estavam em um estado de balanço nutricional;
- II - As baratas tinham acesso a comida rica em proteínas, rica em carboidratos ou um alimento quase balanceado, à vontade para misturar da forma como quisessem;
- III - De acordo com o parágrafo, não apenas as baratas, mas outras espécies de animais não sentem fome por um nutriente específico, por isso comem todos;
- IV - Os seres humanos possuem apetite baseado nos nutrientes que precisam.

De acordo com a passagem do Texto 2 (linhas 1 a 13), marque UMA opção correta:

- a. As afirmativas I e II estão corretas.
 - b. As afirmativas I, III e IV estão corretas.
 - c. As afirmativas I, II e III estão corretas.
 - d. As afirmativas II e IV estão corretas.
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Questão 8 - No Texto 2 (linha 87), a expressão “rock bottom” pode ser substituída por qual outra, sem que haja mudança no significado?

“And there’s another problem — their nutrient density is at an absolute rock bottom, whereas it’s diets rich in wholefoods that peak in these health-giving substances.

- a. fulfilling
 - b. non-existent
 - c. minimum
 - d. let down
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Questão 9 - De acordo com o Texto 2, quais o(s) problema(s) dos alimentos ultraprocessados?

- a. Assim como a produção dos alimentos ricos em gorduras e carboidratos, os alimentos ultraprocessados estão relacionados a uma maior emissão de gases que causam o efeito estufa.
 - b. Os alimentos ultraprocessados, além de serem ricos em gorduras e carboidratos, são baixos em proteína e causam prejuízos ao meio ambiente.
 - c. A Austrália tem sido pioneira em medidas que podem reduzir o consumo de alimentos ultraprocessados.
 - d. Na Austrália, são as pessoas das classes sociais mais altas que consomem grande parte dos alimentos ultraprocessados.
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Questão 10 - Leia o seguinte trecho (linhas 71 a 73):

High protein foods are associated with high greenhouse gas emissions, so you might assume that we should be reducing the density of protein in our diets in order to also reduce our greenhouse gas emissions.

As palavras sublinhadas no trecho (might e should) poderiam ser substituídas sem a perda de sentidos, respectivamente, por:

- a. have to; can.
 - b. may; ought to.
 - c. could; can.
 - d. must; ought to.
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Texto 1

Does AI help humans make better decisions? One judge's track record — with and without algorithm — surprises researchers

1. Should artificial intelligence be used to improve decision-making in the court of law?
2. According to a new working paper, not only does one example of an AI algorithm fail to
3. improve the accuracy of judicial calls, on its own the technology fares worse than humans.
4. “A lot of researchers have focused on whether the algorithm has a bias or AI has a bias,”
5. noted co-author Kosuke Imai, professor of government and statistics. “What they haven’t
6. really looked at is how the use of AI affects the human decision.”
7. While several sectors, including criminal justice, medicine, and even business, use AI
8. recommendations, humans are typically the final decision-makers. The researchers took
9. this into account by comparing criminal bail decisions made by a single judge with
10. recommendations generated by an AI system. Specifically analyzed was AI’s influence on
11. whether cash bail should be imposed.
12. The randomized controlled trial was conducted in Dane County, Wisconsin, focusing on
13. whether arrestees were released on their own recognizance or subjected to cash bail. The
14. researchers — led by Imai and Jim Greiner, the Honorable S. William Green Professor of
15. Public Law at Harvard Law School — set their sights on hearings held by a single judge
16. over a 30-month period, between the middle of 2017 and the end of 2019. Also analyzed
17. were arrest data on defendants for up to 24 months later.
18. Results showed that AI alone performed worse than the judge in predicting reoffenders —
19. in this case, by imposing the tighter restriction of cash bail. At the same time, little to no
20. difference was found between the accuracy of human-alone and AI-assisted
21. decision-making. The judge went against AI recommendations in slightly more than 30
22. percent of cases.
23. “I was surprised by this,” Greiner said. “Given the evidence that we’ve cited that algorithms
24. can sometimes outperform human decisions, it looked as though what happened is that this
25. algorithm had been set to be too harsh. It was over-predicting that the arrestees would
26. misbehave, predicting that they would do so too often, and, therefore, recommending
27. measures that were too harsh.”
28. This issue could be fixed by recalibrating the algorithm, the professors argued.
29. “It’s a lot easier to understand and then fix the algorithm or AI than the human,” Imai said.
30. “It’s a lot harder to change the human or understand why humans make their decisions.”
31. The AI studied here did not specifically account for race, instead focusing on age and nine
32. factors related to past criminal experience. Imai, an expert on deploying statistical modeling
33. to call out racial gerrymandering, attributed inequities concerning cash bail to a variety of
34. societal factors, particularly relating to criminal history.
35. He acknowledged that the study’s findings may be cause for concern, but he noted that
36. people are biased as well. “The advantage of AI or an algorithm is that it can be made
37. transparent,” he said. The key is to have open-source AI that is readily available for
38. empirical evaluation and analysis.
39. The way the criminal justice system is currently using AI as well as unguided human
40. decisions should be studied with an eye to making improvements, Greiner added. “I don’t
41. know whether this is comforting,” he offered, “but my reaction for folks who are afraid or
42. skeptical of AI is to be afraid and skeptical of AI, but to be potentially more afraid or
43. skeptical of unguided human decisions.” He added that the way the criminal justice system
44. is currently using AI as well as unguided human decisions should be studied to make
45. improvements.

ROJAS, Nikki. “Does AI help humans make better decisions?”. **The Harvard Gazette**, Cambridge, Massachusetts, USA, June 14. 2024.

Texto 2

What can cockroaches teach us about eating well?

Insights from the natural world are helping us better understand why we overeat and how to rebalance our food system to address the problem, writes Professor David Raubenheimer from the Charles Perkins Centre.

1. You may have more in common with cockroaches than you realise.
2. In an experiment, researchers first manipulated cockroach diets so they were either being
3. fed exclusively a high protein, high carbohydrate, or a near-balanced food — putting them
4. in different states of nutritional imbalance. Then they were given access to all three foods,
5. enabling them to mix whatever diet they wished. Amazingly, all three groups of
6. cockroaches selected just the right combination of the three foods to rebalance their diets,
7. and then continued to eat according to that ratio. What this tells us is that cockroaches —
8. and the 40 or so other animal species the researchers have studied — have not just a
9. single appetite, they have appetites that make them hungry for specific nutrients
10. depending on what they need at a given time. And interestingly, humans have these
11. nutrient-specific appetites too. It's insights like this gleaned from the natural world that are
12. helping us better understand why we overeat and how imbalances in our modern food
13. system are contributing to the problem. A 'food system' is an immensely complex set of
14. interacting factors that surround every food and meal that we eat. Broadly speaking, food
15. systems can be partitioned into those factors that influence what we eat — such as the
16. availability, tastiness and affordability of different foods — and those factors that are
17. influenced by what we eat — such as the economic and environmental consequences of
18. our dietary choices. One of the greatest challenges we're facing in Australia and globally
19. is that the factors that influence what we eat are configured in such a way that some
20. outcomes are optimised at the expense of others. The production and marketing of foods,
21. as well the policies regulating these, are optimised for economic benefit, often at a cost to
22. the environment and public health.

23. **Rebalancing the food system**

24. We need to find a way to rebalance the food system. And to do that, researchers are

25. turning to what we might learn from how other species navigate the complexity of natural

26. food systems — ecosystems — and how these findings apply to our own species.

27. For example, in their research on our closest living cousins in the wild — other primate

28. species — they found that owing to natural ecological fluctuations (such as the changing

29. seasons) primates are regularly stuck in imbalanced food environments that prevent them

30. from eating a balanced diet. In such circumstances, most primates prioritise their intake of

31. protein more strongly than the two other macronutrients we need — fat and

32. carbohydrates. In other words, their appetites regulate their intake of protein more

33. strongly than fat and carbohydrates, and as a result on low protein diets they will overeat

34. fat and carbohydrates, and on high protein diets they will undereat fat and carbohydrates.

35. Humans also show protein prioritisation, so we're no different to other primate species in

36. that respect. Why this matters is it helps us understand in an entirely different way why it

37. is that we overeat in our modern food systems. Surprisingly, we don't overeat fats and

38. carbs because we have particularly strong appetites for those nutrients, but because we

39. have a stronger appetite for protein! As we reduce the percentage of protein in our diets,

40. to maintain our protein intake around normal levels the amount of fats and carbohydrates

41. we eat increases exponentially. It's not because there's something wrong with our biology

42. that needs a pharmaceutical or other approach to deal with — our biology is intact, the

43. same as our wild primate cousins.

44. **The problem of overconsumption**

45. What has changed to drive the nutritional predicament we're in today is the environment

46. we find ourselves in. Protein has been diluted in our food system, leading to the epidemic

47. of overconsumption that's plaguing the planet and the health of our species.

48.

49. According to The Australian Dietary Guidelines, we should be getting between 15 and 25
50. percent of our energy intake from protein, between 45 to 65 percent from carbohydrates
51. and between 20 to 35 percent from fats. This allows us to identify at a glance whether the
52. composition of our diet, or a particular food or meal is balanced nutritionally with respect
53. to these recommendations. And allows us to identify which categories of foods are
54. responsible for the protein dilution in our food system. What research has shown is that
55. it's ultra processed foods that are the culprit for diluting the protein concentration in our
56. diets in the Australian and the global food system. Ultra processed foods are foods that
57. originate not from a forest or from a field but from a factory. They have their roots in
58. industrial manufacture, not in agriculture or in harvesting from the wild. They are designed
59. by food engineers not to nourish human bodies or protect the environment, but to nourish
60. and protect the financial returns for shareholders.

61. Unfortunately, from an affordability perspective what research has shown is that low
62. income groups in Australia are associated with low protein diets and hence spontaneous
63. excess energy intake. They're also more likely to be gravitating towards these ultra
64. processed foods. The reason for that is that when you compare the relative cost of the
65. different macronutrients in the foods that we eat, protein is the expensive one.

66. Avoiding obesity then becomes a socio-economic challenge, with people on lower
67. incomes forced away from the recommended protein intake and towards overeating of
68. fats and carbohydrates.

69. **Processed foods linked to higher emissions**

70. Understanding that we prioritise protein is also important when considering the
71. environmental impacts of the diets that we eat. High protein foods are associated with
72. high greenhouse gas emissions, so you might assume that we should be reducing the
73. density of protein in our diets in order to also reduce our greenhouse gas emissions.

74. But this assumes that our energy intake remains constant as the proportion of protein in
75. our diet decreases, which we know is not true. It is our protein intake which remains more
76. constant, so as we dilute the proportion of protein in our diet our energy intake increases.

77. If we reanalyse the data in those terms we find that reducing protein in the diet will reduce
78. greenhouse gas emissions, but only if high protein foods are replaced by real
79. plant-derived foods, such as vegetables, grains, fruit and pulses. If high protein foods are
80. replaced by ultra processed foods, environmental damage is not reduced, and can even
81. be worse. One reason for this is the energy used in the industrial production of ultra
82. processed foods. Another reason is their low protein content leads to overconsumption —
83. and the production of each additional calorie eaten produces greenhouse gases.

84. Real foods that are low in protein, such as vegetables and grains, are not overeaten in the
85. same way, because they contain gut-filling fibre. So ultra processed foods are low in
86. protein, high in energy, and damaging to the environment.

87. And there's another problem — their nutrient density is at an absolute rock bottom,
88. whereas it's diets rich in wholefoods that peak in these health-giving substances.

89. Why then do we tolerate diets that are unhealthy and unsustainable?

90. Nobody really wants the planet to be poisoned. Nobody wants our bodies to be poisoned.
91. Yet both outcomes are so persistent within our food system. This is because they are
92. deeply bedded within the economic system that governs all of this, such that there are
93. market benefits to the economy of having ultra processed foods consumed at the high
94. levels they are. Market benefits are, of course, good for the country — but at what cost to
95. public and planetary health? The key challenge then is to manage the drivers of our food
96. system in such a way that the economic, health and environmental benefits are better
97. balanced. Policy tools are available for this, and are already being implemented in some
98. countries. These include health taxes (based for example on the amount of added sugar),
99. front of package warning labels, restrictions on marketing and distribution, and media
100. campaigns.

101.

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| 102. | No one of these will on its own address the problem. They need to be interlinked in sets of |
| 103. | reinforcing strategies, as is being done in Chile and Brazil. |
| 104. | Such tools are no stranger to Australia. They have been used to good effect to reduce |
| 105. | tobacco, and to some extent, alcohol consumption. |
| 106. | Similar measures applied to food will help reduce the burden of preventable disease and |
| 107. | save the natural world on which we rely for producing food. |
| 108. | Including those species, such as insects and apes, that have helped us understand how |
| | we have gone wrong and where we can do better. |

Raubenheimer, David. "What can cockroaches teach us about eating well?". **The University of Sydney**, Sydney, Australia, June 20, 2024.

Gabarito

1. c
2. b
3. c
4. b
5. c
6. a
7. d
8. c
9. b
10. b