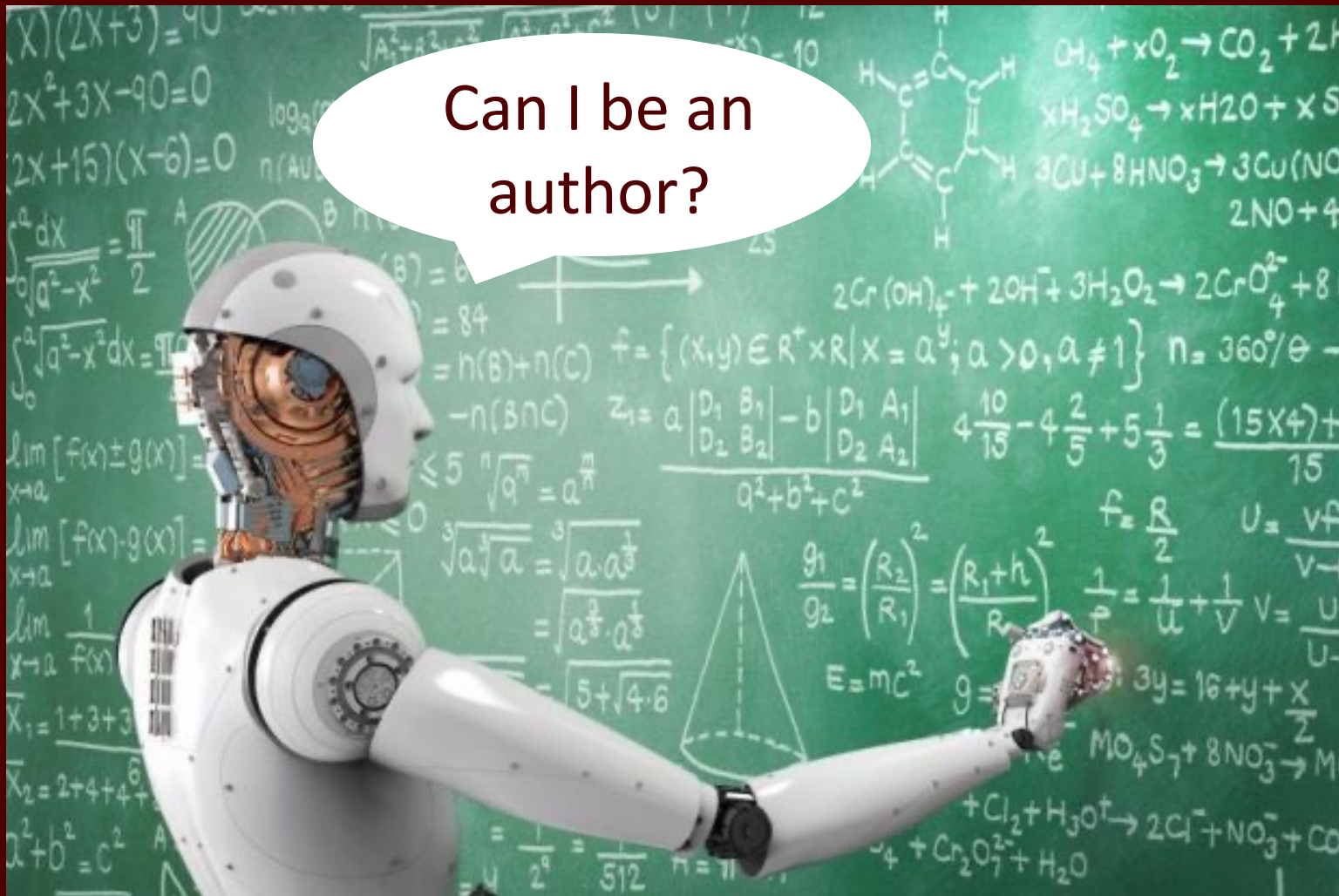


Prof. Peter K. Yu (余家明)  
Director, Center for Law and Intellectual Property  
Texas A&M University School of Law  
<http://www.peteryu.com>



# Copyright, Artificial Intelligence and the Law-Machine Interface

Can I be an author?





# Compendium of U.S. Copyright Office Practices

THIRD EDITION



## 313.2 Works That Lack Human Authorship

[T]he Copyright Act protects “original works of authorship.” 17 U.S.C. § 102(a) (emphasis added). To qualify as a work of “authorship” a work must be created by a human being. *See Burrow-Giles Lithographic Co.*, 111 U.S. at 58. . . . [T]he Office will not register works produced by a machine or mere mechanical process that operates randomly or automatically without any creative input or intervention from a human author.

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**Copyright Law**  
OF THE **United States**

*and Related Laws Contained in  
Title 17 of the United States Code*



Work Made  
for Hire!

EUROPEAN COURT OF HUMAN RIGHTS  
COUR EUROPÉENNE DES DROITS DE L'HOMME





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creative  
human  
input or  
intervention

5

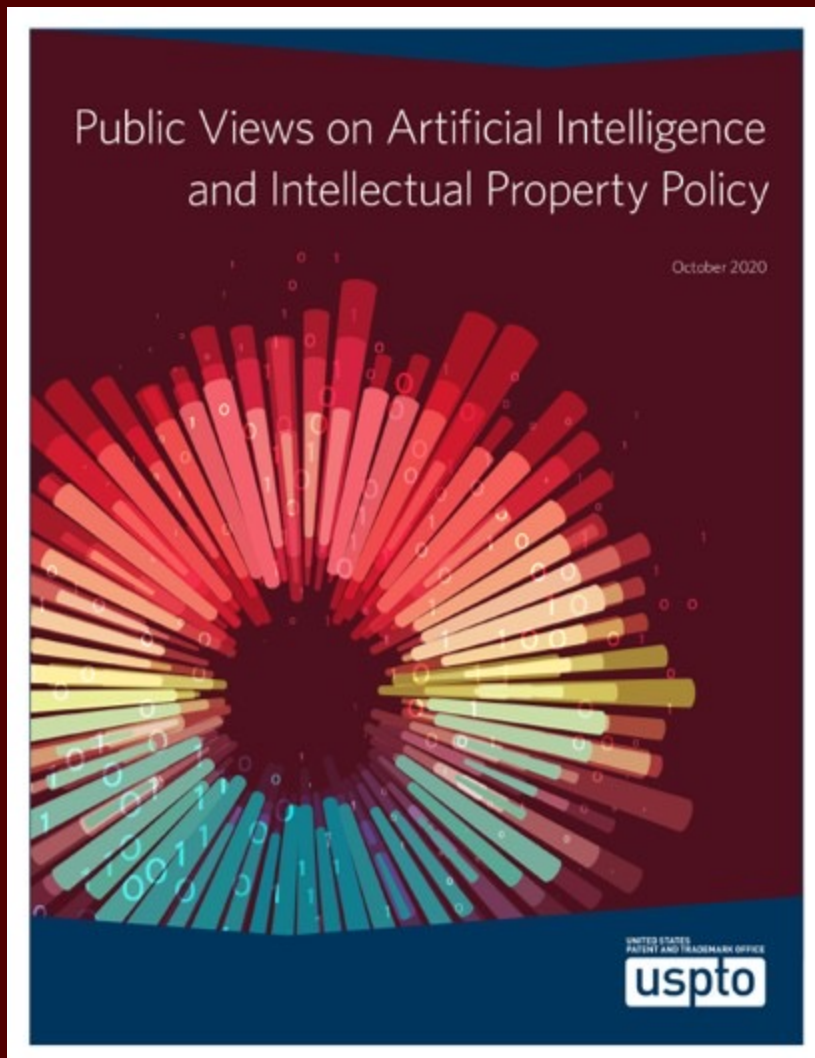
first owner designed the  
AI algorithm

10

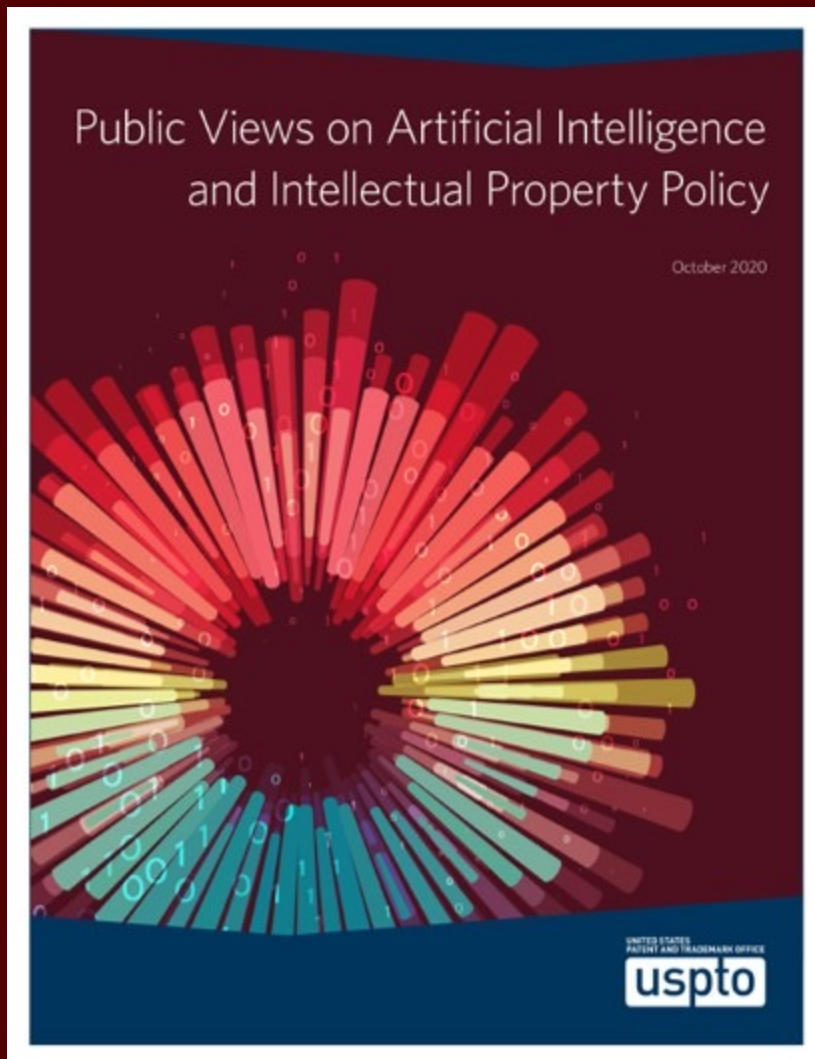
second owner selected and  
inputted the training data

0

current owner just purchased  
the AI system



Assuming involvement by a natural person is or should be required, what kind of involvement would or should be sufficient so that the work qualifies for copyright protection? For example, should it be sufficient if a person (i) designed the AI algorithm or process that created the work; (ii) contributed to the design of the algorithm or process; (iii) chose data used by the algorithm for training or otherwise; (iv) caused the AI algorithm or process to be used to yield the work; or (v) engaged in some specific combination of the foregoing activities?



Assuming involvement by a natural person is or should be required, what kind of involvement would or should be sufficient so that the work qualifies for copyright protection? For example, should it be sufficient if a person (i) **designed the AI algorithm or process that created the work**; (ii) **contributed to the design of the algorithm or process**; (iii) **chose data used by the algorithm for training or otherwise**; (iv) **caused the AI algorithm or process to be used to yield the work**; or (v) **engaged in some specific combination of the foregoing activities**?

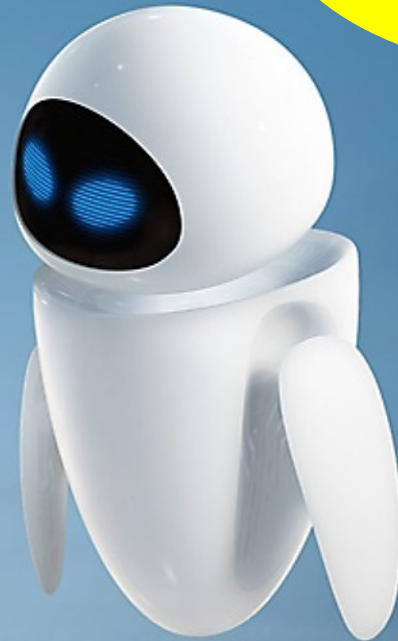
*“The Congress shall have Power...  
To promote the Progress of Science  
and useful Arts, by securing for  
limited Times to Authors and  
Inventors the exclusive Right to their  
respective Writings and Discoveries.”*

Should copyright law change if the creative human input is only 10%?

20%?



It will be a while before we get robots that can create on their own.



## ARTIFICIAL INTELLIGENCE, THE LAW–MACHINE INTERFACE, AND FAIR USE AUTOMATION

*Peter K. Yu\**

### INTRODUCTION

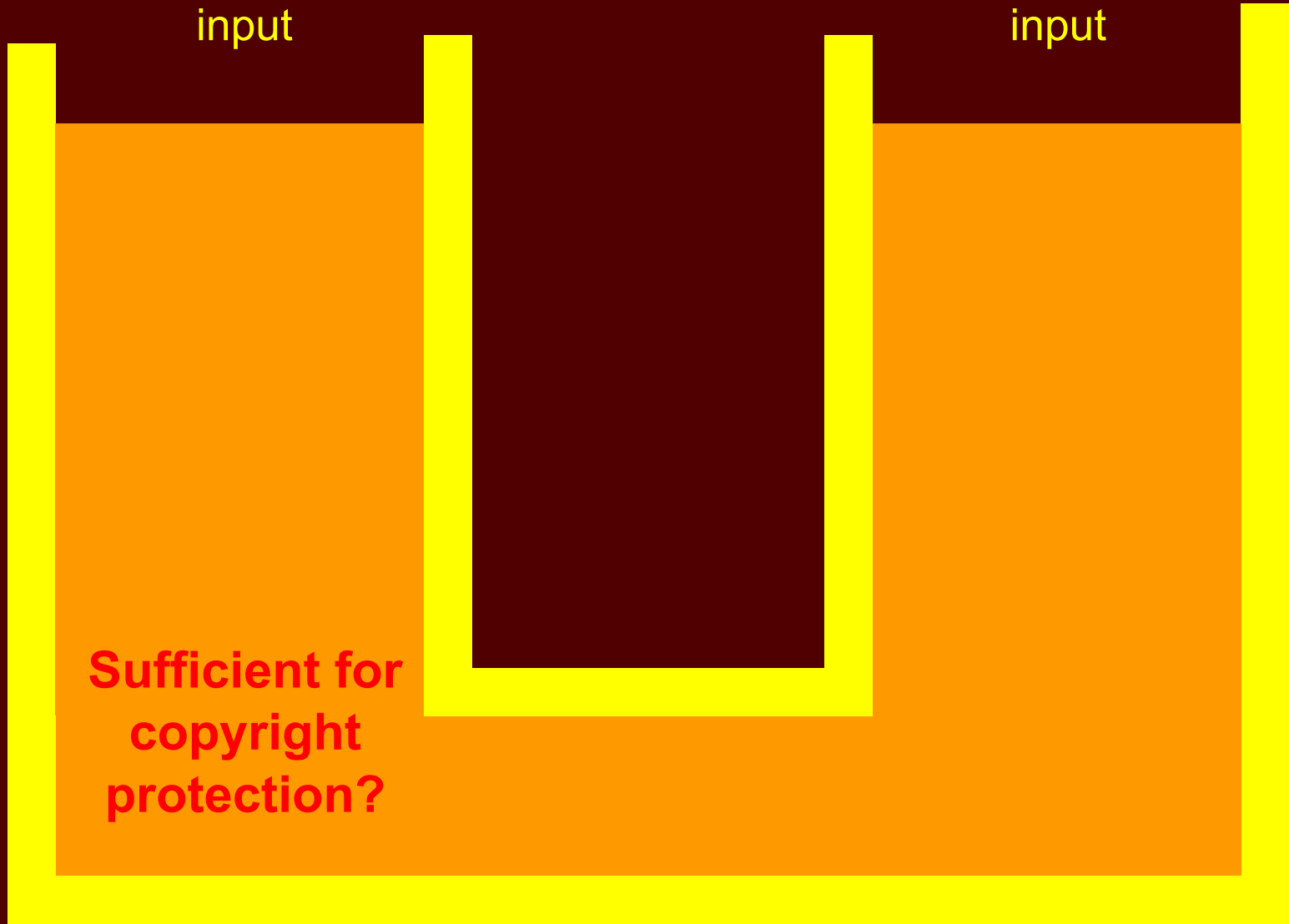
The past decade has seen artificial intelligence (AI) advancing in leaps and bounds, capturing the attention of not only computer experts and academic commentators but also policymakers,<sup>1</sup> the mass media, and the public at large.<sup>2</sup> In the early 2010s, IBM Watson successfully defeated two noted human champions in the quiz show *Jeopardy!*<sup>3</sup> A few years later, Google DeepMind created a “Sputnik moment” in Asia<sup>4</sup> when it beat the world’s best players in Go, an Asian strategy board game.<sup>5</sup> In addition, recent research has shown the fast-growing improvements in the performance of artificial intelligence in poker games.<sup>6</sup> Compared with quiz shows and chess games, these games have been




Human  
creative  
input

AI  
creative  
input

**Sufficient for  
copyright  
protection?**





A portrait of a man in a dark hat and white ruff collar is displayed on an ornate easel in a gallery. The man has a mustache and is looking directly at the viewer. The gallery has a dark wall with a light-colored lower section and is lit by spotlights. A speech bubble is overlaid on the image, containing the text "Am I protectable?".

Am I  
protectable?

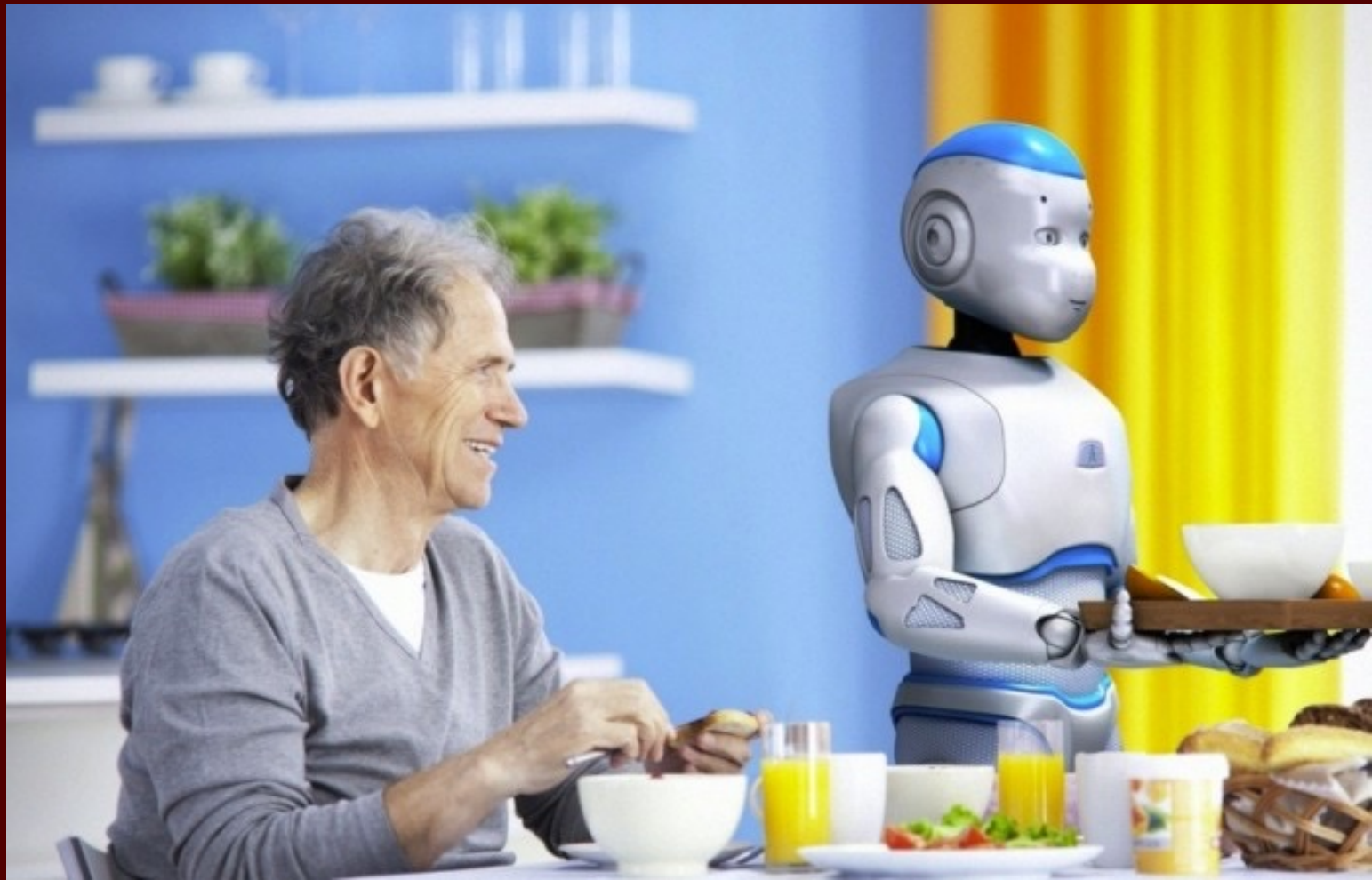


An...  
pro... ble?





**The race to  
winning AI**



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