how to train your model

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machine learning

creating algorithms that improve automatically through experience over time

machine learning

building a mathematical model based on "training data" in order to make predictions

supervised learning

when the answers are known ahead of time, and the computer tries to find a model to fit the data

i.e. classification

unsupervised learning

when the answers aren't known ahead of time, and computer finds patterns

i.e. clustering

reinforcement learning

when the answers aren't known ahead of time and the algorithm learns by trial and error through "incentives"

popular in teaching computers to play games

MRTH


it's the matrix
because there are a lot of
matrices in ml

classifiers

put objects into groups based on their characteristics

linear classifiers

Do this based on a boundary that is a "line"

(or through ~*linear combination*~)

ok now math

linear classifier

אכאב
@zeigenvector

Who called it Tinder and not Naive Baes Classifier?

11:56 AM · Sep 28, 2016 · Twitter Web Client

395 Retweets and comments **910** Likes

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autocomplete ranking is a matter of classification — is it the thing you're looking for or not?

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tl;dr, turning logs into decimals using supervised learning

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feature extraction

"features" are the attributes of the item that could be influencing the classification

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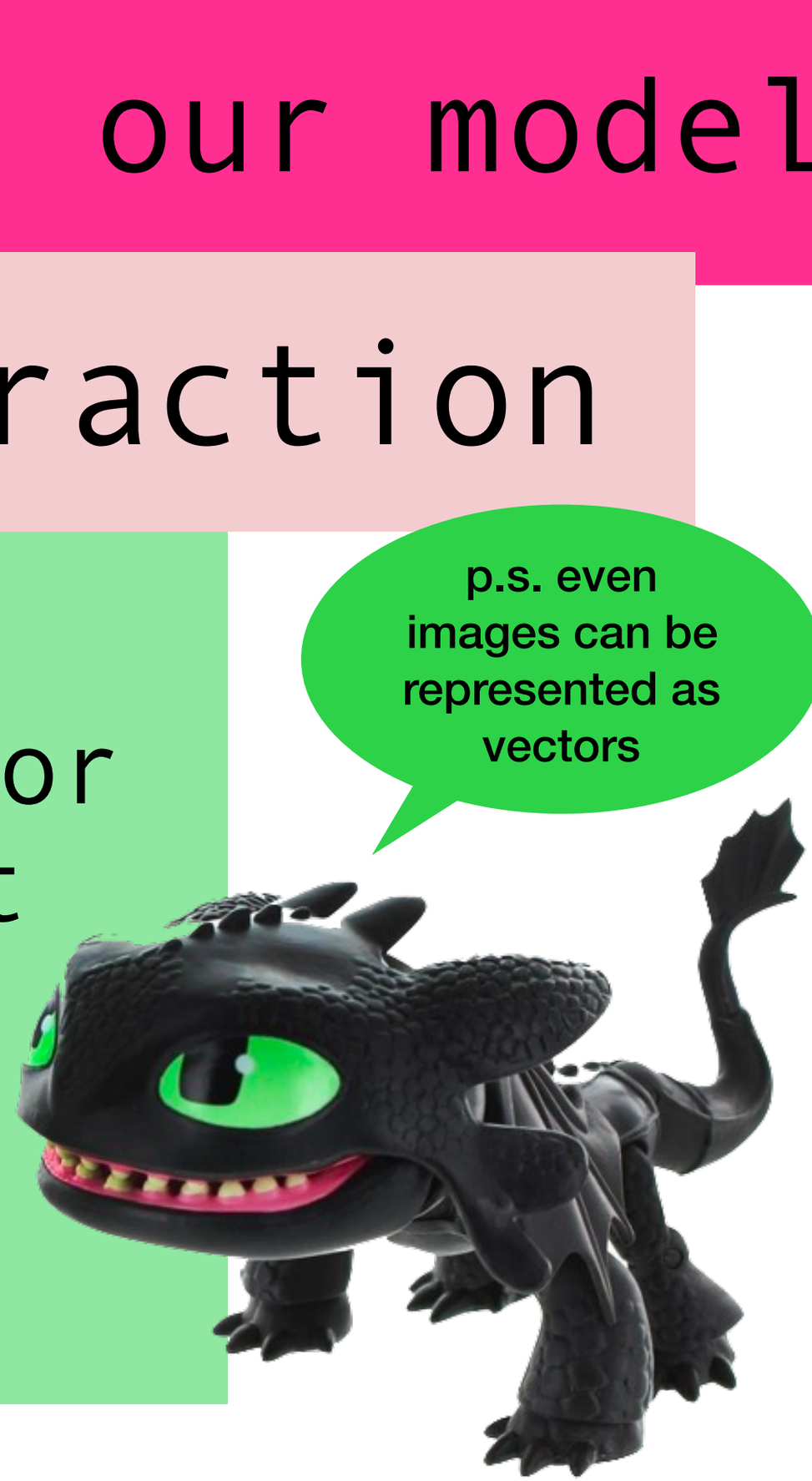
feature extraction

creates a "feature vector" for each item, a list of all the features and their values

p.s. even images can be represented as vectors



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training

feature vectors from the selected and not selected items are used as data to train the "model"

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training

the model will be a vector which has weights for each of the features

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training

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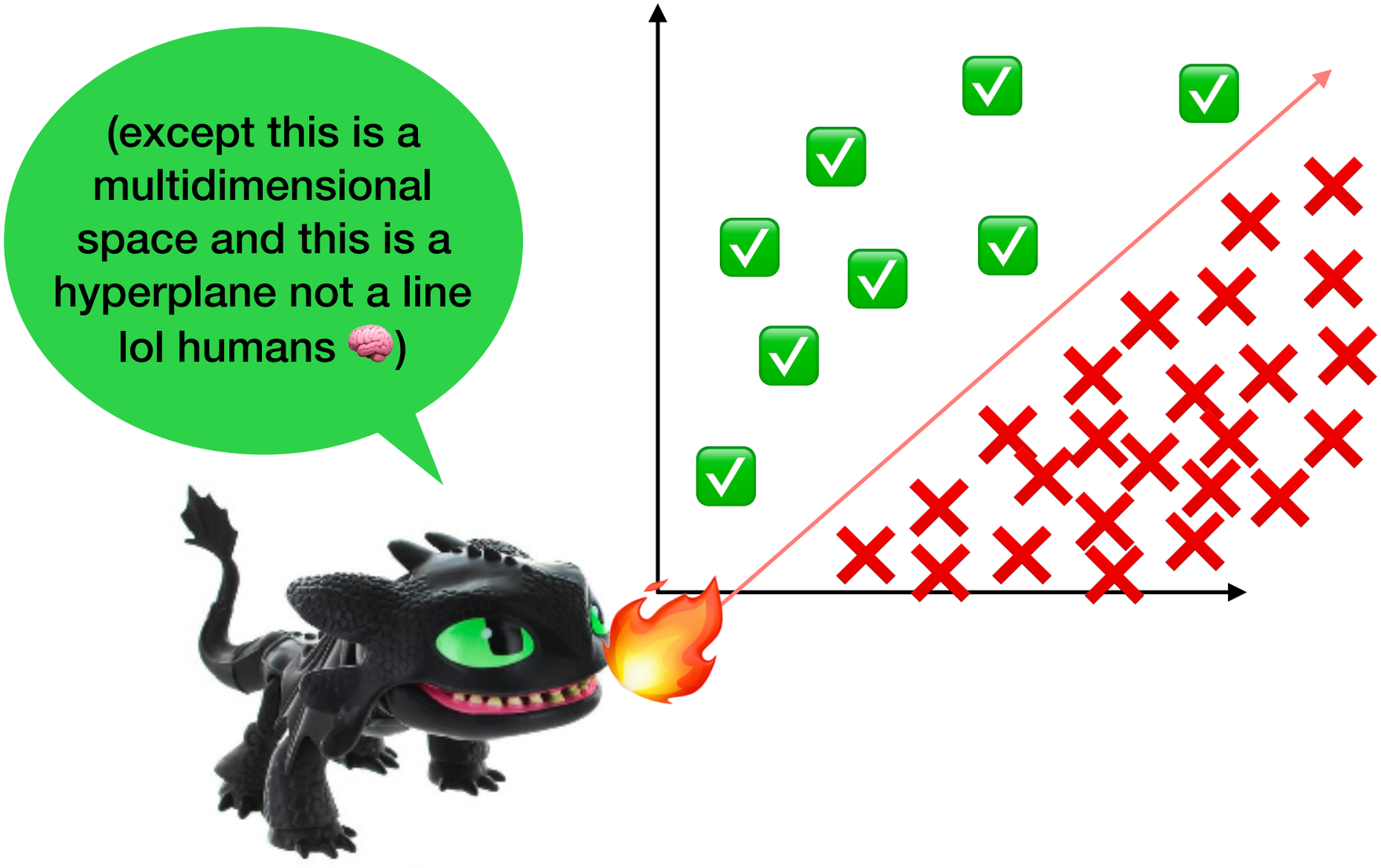
training



how we train our model

training

how we train our model

scoring

An item's score is the sum of the product of each feature's value and its weight

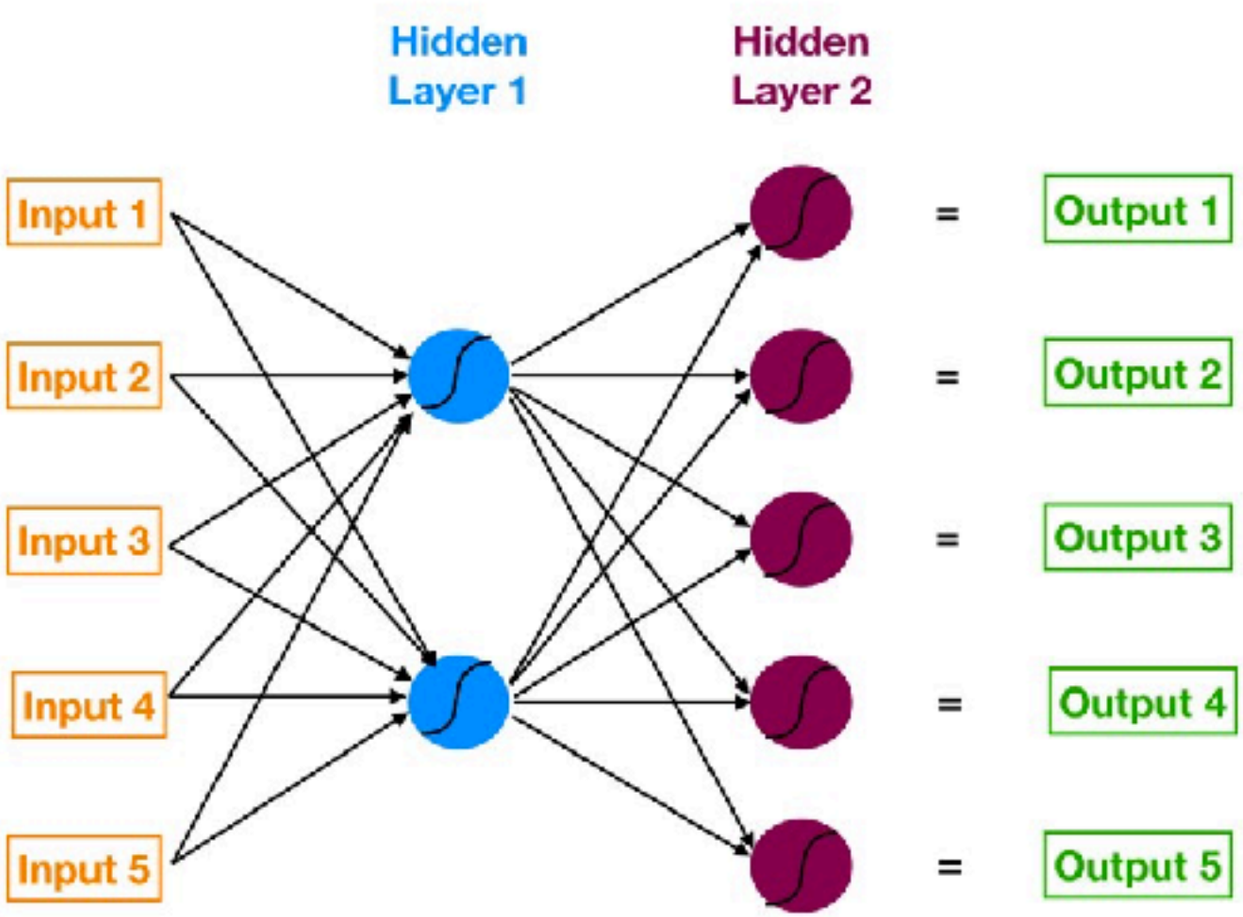
For MATH, head to https://en.wikipedia.org/wiki/Linear_classifier

ok but what about ~*deep learning*~

"neural networks"

https://towardsdatascience.com/understanding-neural-networks-19020b758230

ok but what about ~*deep learning*~



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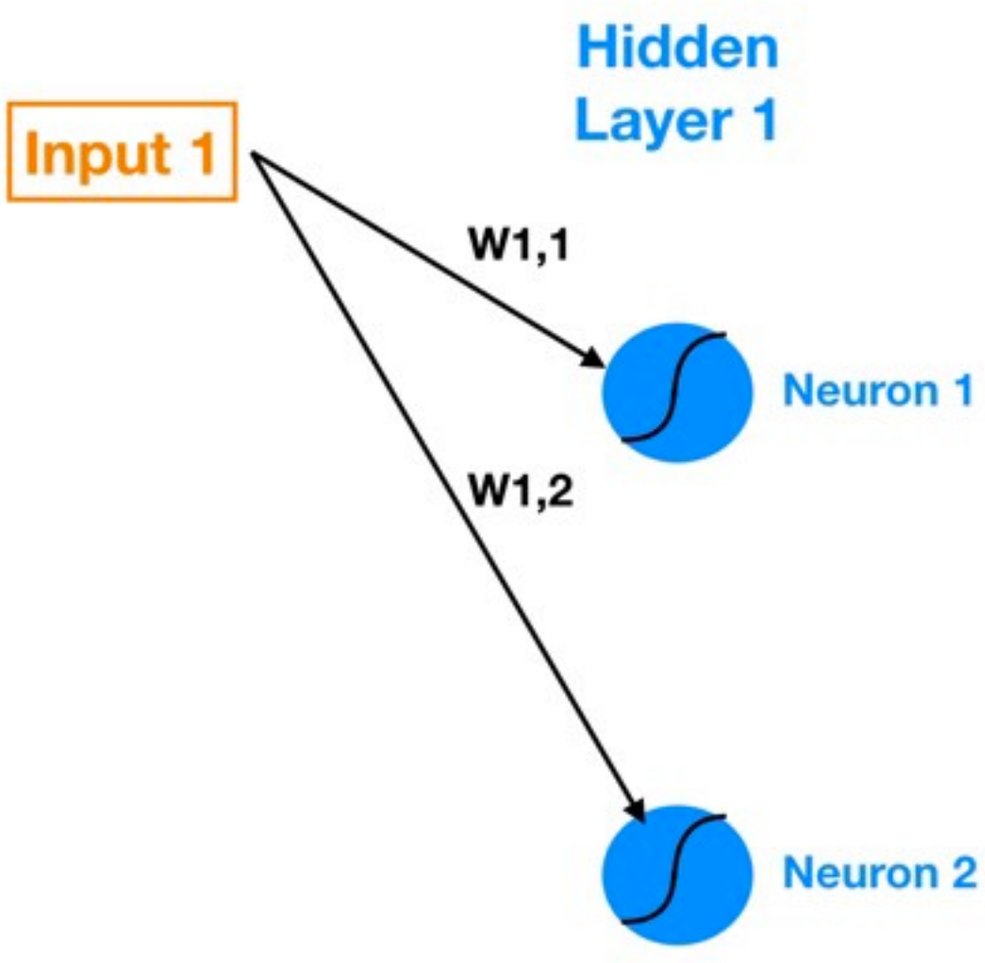

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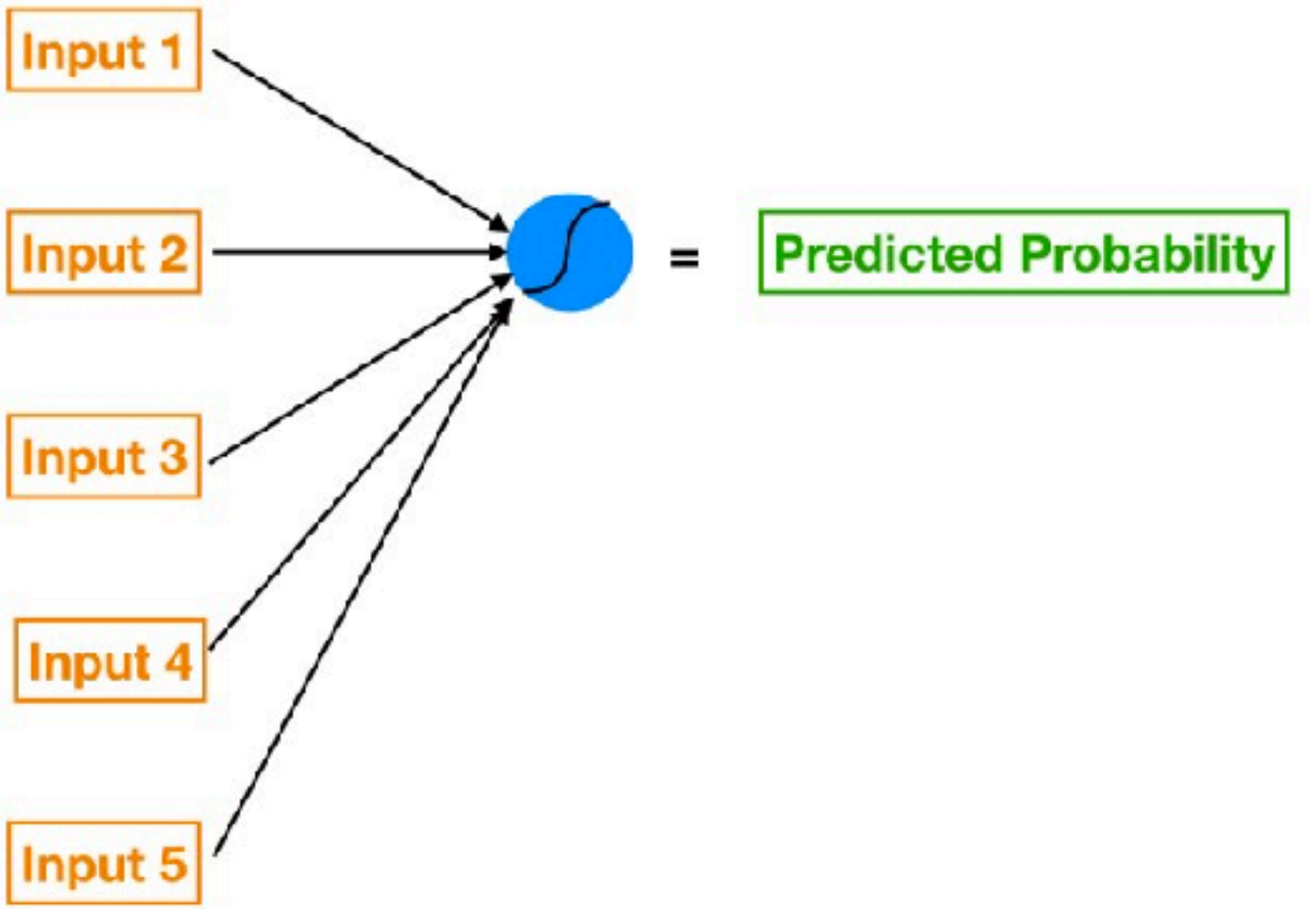

minimize
cost, like before

https://towardsdatascience.com/understanding-neural-networks-19020b758230

how to train your model ethically.

how to train your model

algorithmic bias is real.

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thanks!