

lessons learned in the land of autocomplete



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wait, what do you
mean by autocomplete?

Message #climbing_js



B

I



Aa



silly frontend,



**complex
autocomplete
are for
backends!**

1. Request

2. Filter

3. Sort

machine learning
lessons!

performance
lessons!

career
lessons!

machine learning
lessons!

machine learning lessons!

autocomplete
should be
tailored to the
user's behavior



machine learning lessons!

algorithms
that improve
automatically
through experience
over time



machine learning lessons!

building a
mathematical
model based on
"training data",
used to "make
predictions"



machine learning lessons!

tl;dr, turning
logs into decimals
using supervised
learning



machine learning lessons!

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

feature extraction



machine learning lessons!

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

feature extraction



machine learning lessons!

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

training

coming soon
from DreamWorks,
"How to Train Your
Model"



machine learning lessons!

The background image is a dark, atmospheric scene of a jungle at night. A bright light source, possibly a fire or a full moon, is visible in the distance, casting a glow through the dense foliage. The word "MATH" is written in a large, black, dripping font, resembling blood, across the center of the image. The dripping effect is most prominent on the letters 'M', 'A', and 'H'.

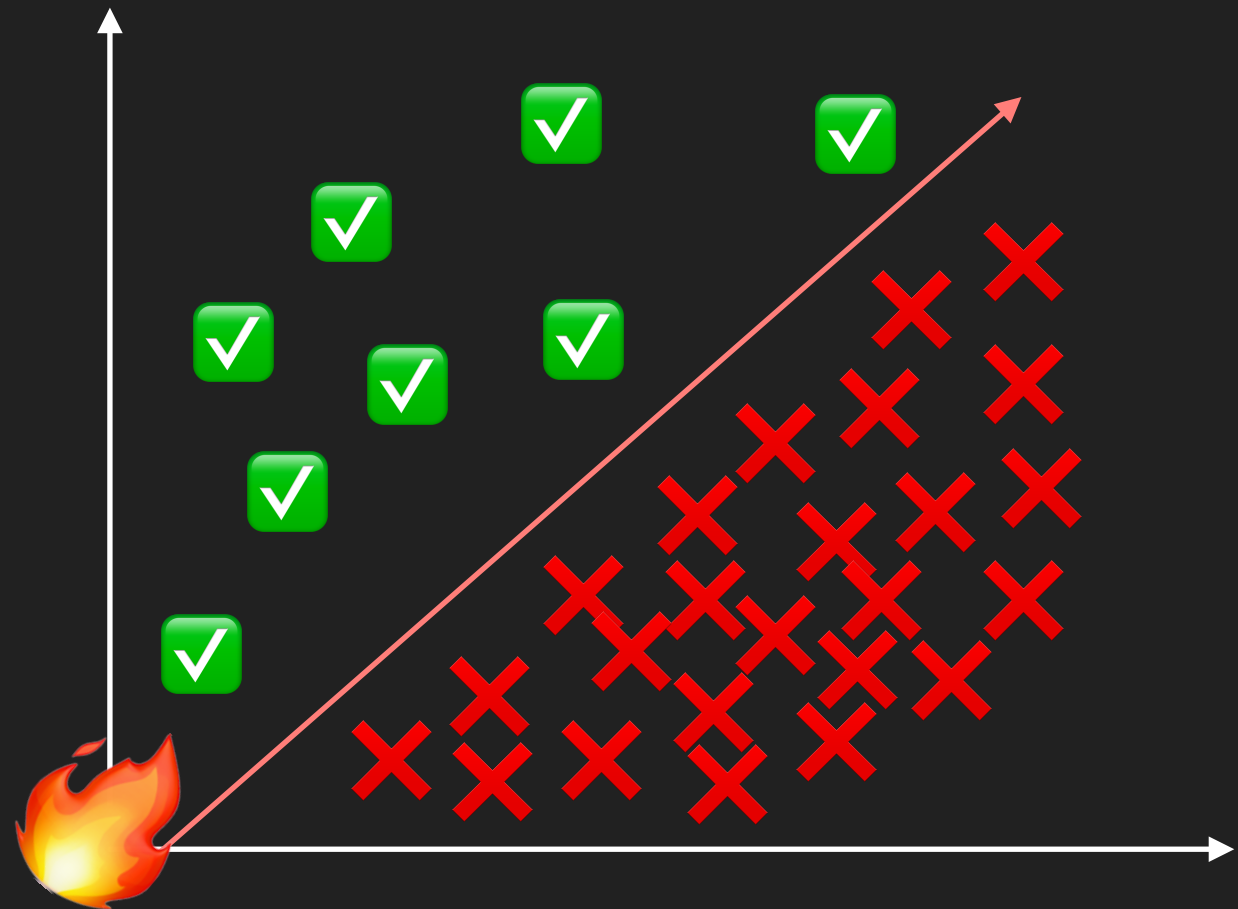
MATH

training

it says "math"

machine learning lessons!

(except this is a
multidimensional
space and this is a
hyperplane not a line
lol humans 🧠)



training

machine learning lessons!

minimize costs
\$\$\$!!!

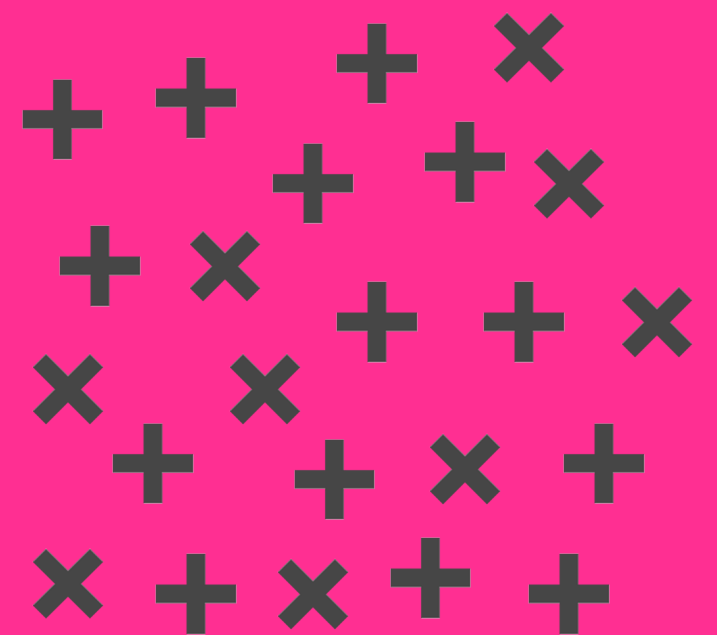


training

machine learning lessons!

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

scoring



machine learning lessons!

then sort all the
things by score!
personalization!

scoring



performance
lessons!

performance lessons!

autocomplete do
a lot of stuff in
an unbelievably
short amount of
time!



performance lessons!

do less stuff!

LOL!

#1 top
performance
rule!



performance lessons!

measure first,
act second



performance lessons!

"stash" the
answers to
expensive and
re-used things

Corollary: don't do expensive
things in sort comparators!



performance lessons!

sometimes you
need to get
creative



performance lessons!

memory usage
is also an
important aspect
of performance



it's a
garbage
collection
fire

performance lessons!

ultimately,
performance
is about
user experience



career lessons!


career lessons!

yes, sometimes you
get lucky with
projects, but
luck \neq success



career lessons!

find something
critical but
under-
appreciated...



get it? i'm a
hidden gem

career lessons!

...and then
become
The Person™



career lessons!

if you think a
project is
worth it, keep
pushing for it



lessons!
everywhere!

Thanks!

@zeigenvector

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