

Report plan:

1. Introduction
  - a. What is machine learning
  - b. What kind of problems you can solve using ML approach
  - c. Supervised learning vs Unsupervised learning
2. Linear Regression with one variable
  - a. Creating a model
  - b. Cost-function
3. Fitting Model
  - a. Gradient descent
4. Linear Algebra Review
  - a. Matrices and vectors

Questions:

1. What's the difference between supervised and unsupervised learning?
2. What kind of problems you can solve using supervised learning?
3. What is cost-function and why even bother using it?
4. What's gradient descent and how we use it in our model?

Glossary:

Machine Learning - "A computer program is said to learn from experience  $E$  with respect to some class of tasks  $T$  and performance measure  $P$ , if its performance at tasks in  $T$ , as measured by  $P$ , improves with experience  $E$ ." (Tom Mitchel) - *We can easily solve this problem using machine learning approach.*

Supervised Learning - learning with given "right answers" for input dataset - *Supervised learning problems are categorized into "regression" and "classification" problems.*

Cost function - a mathematical function that shows the accuracy of our model compared with given "right answers" - *In perfect prediction model cost function is zero.*

P.S. I've attached a few memes on COVID-19 as you asked in criteria





Tomáš Bella  
@kvasinka

Experts recommend keeping your daily rituals even while working from home.

