DataTalks.Club

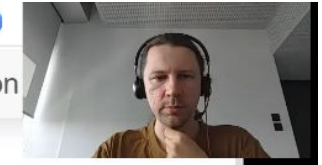
Machine Learning Zoomcamp

Alexey Grigorev

Me

localhost:8888/notebooks/02-price-prediction-live.ipynb

File Edit View Insert Cell Kernel Widgets Help Trusted Python



```
vehicle_style                convertible
highway_mpg                           19
city_mpg                              11
popularity                            86
Name: 10, dtype: object
```

In [123]:
```
xi = [453, 11, 86]
```

In [ ]:
```
w0 = 0
w = [1, 1, 1]
```

In [122]:
```
def linear_regression(xi):
    n = len(xi)

    pred = w0

    for j in range(n):
        pred = pred + w[j] * xi[j]

    return pred
```

$$w_0 + \sum_{j=0}^{n-1} w_j x_{ij}$$

Build a portfolio of real-life projects

Machine Learning Bookcamp

MEAP

Alexey Grigorev

mlbookcamp.com

Team

Alexey Grigorev

Instructor

Dmitry Muzalevskiy

Teaching Assistant

Wendy Mak

Teaching Assistant

Is it for me?

Yes, if

- You know how to program
- You know a bit of Python or can learn it quickly
- You feel comfortable with command line

Not required:

- Previous experience with ML

alexeygrigorev / **mlbookcamp-code**

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Code | Issues | Pull requests 1 | Actions | Projects | Wiki | Security | Insights | ...

master | mlbookcamp-code / course-zoomcamp / | Go to file | Add file | ...

wwymak Correct spelling mistake on cudatoolkit, add conda-forge — 79f6fb2 1 hour ago — History

..		
01-intro	Correct spelling mistake on cudatoolkit, add conda-forge	1 hour ago
README.md	Update README.md	1 hour ago

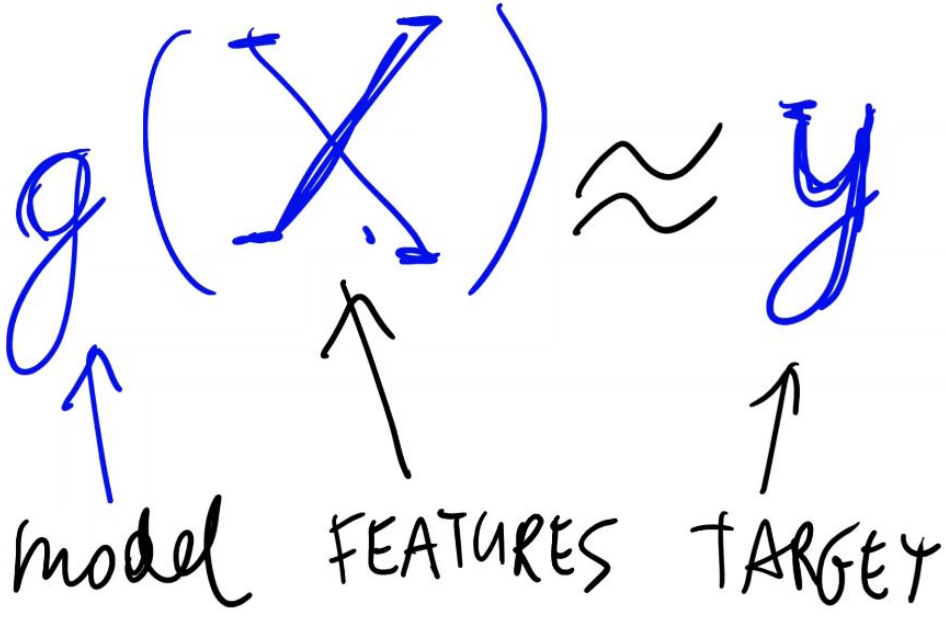
README.md

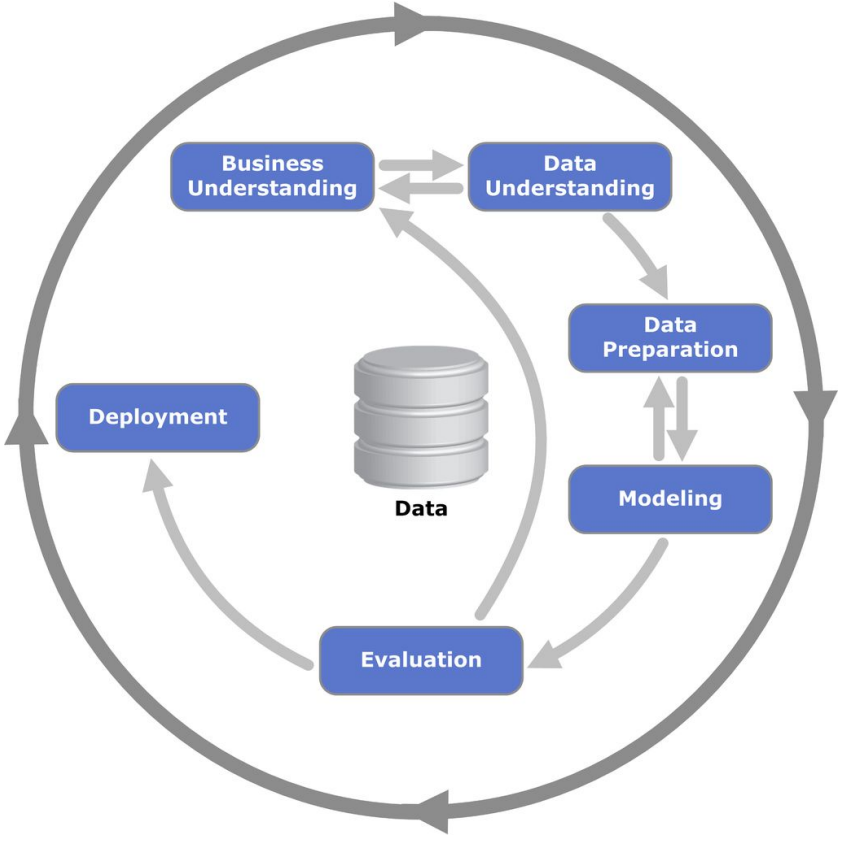
Machine Learning Zoomcamp

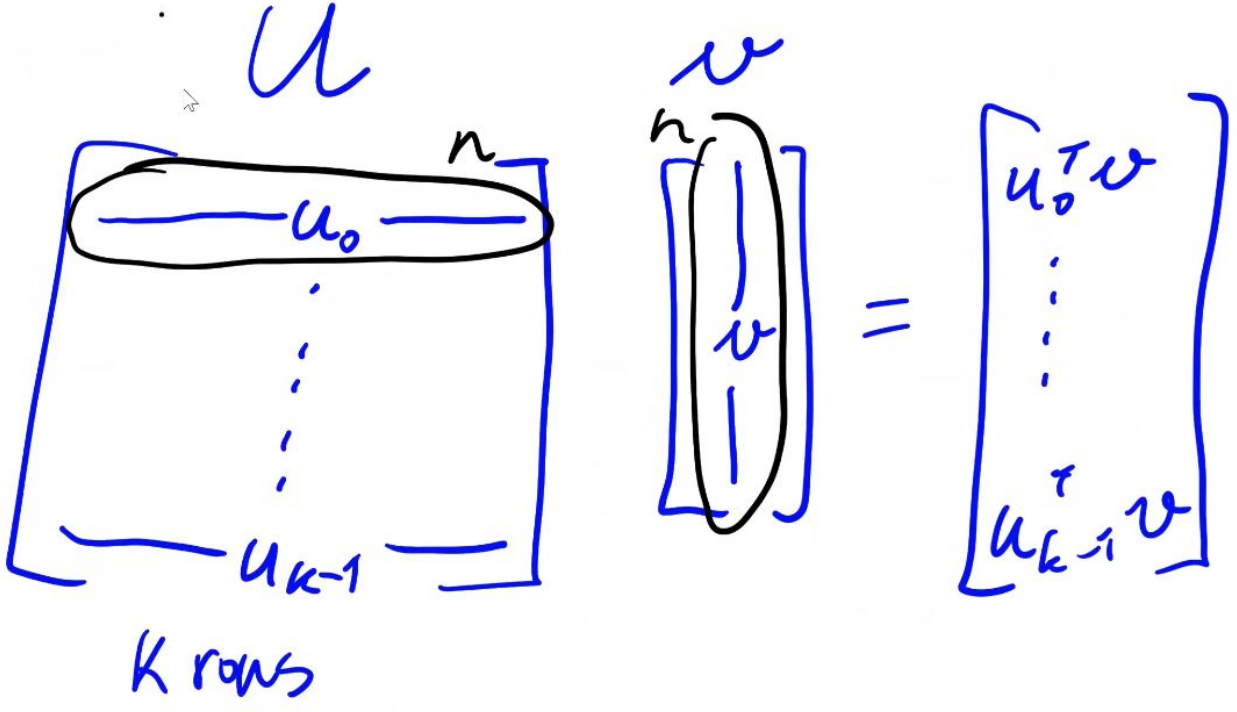
https://github.com/alexeygrigorev/mlbookcamp-code/tree/master/chapter-09-kubeflow

Course plan

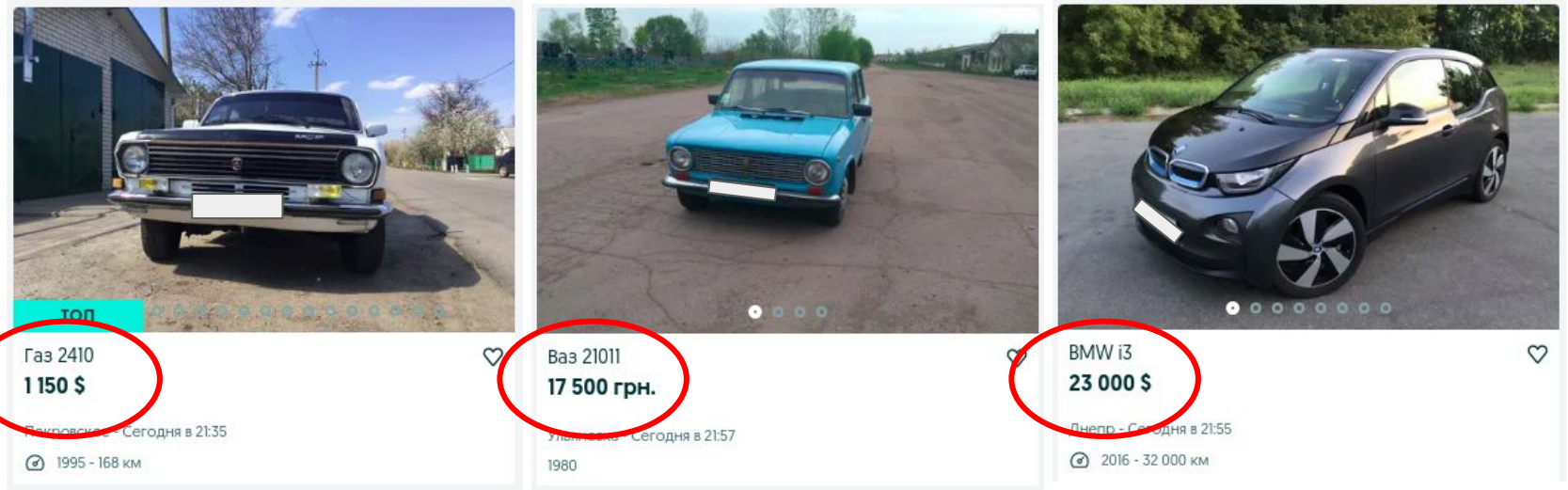
Session 1: Introduction




Business Understanding
Data Understanding
Data Preparation
Modeling
Evaluation
Deployment
Data


U
n
u_0
u_{k-1}
K rows
v
n
v
=
$u_0^T v$
$u_{k-1}^T v$

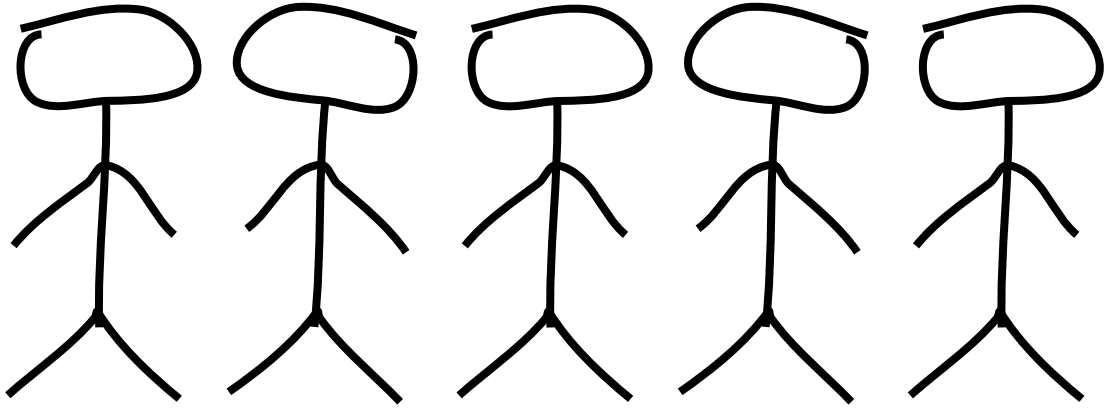
Session 2: Car Price Prediction

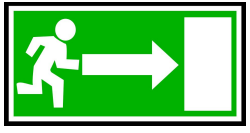


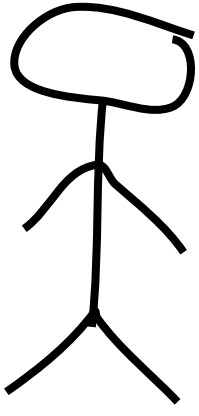
https://github.com/alexeygrigorev/mlbookcamp-code/blob/master/chapter-02-car-price/02-carprice.ipynb

Pictures from olx.ua

Session 3: Churn prediction





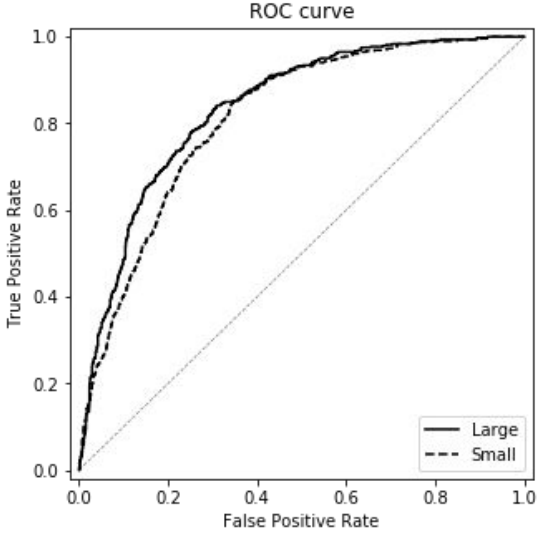


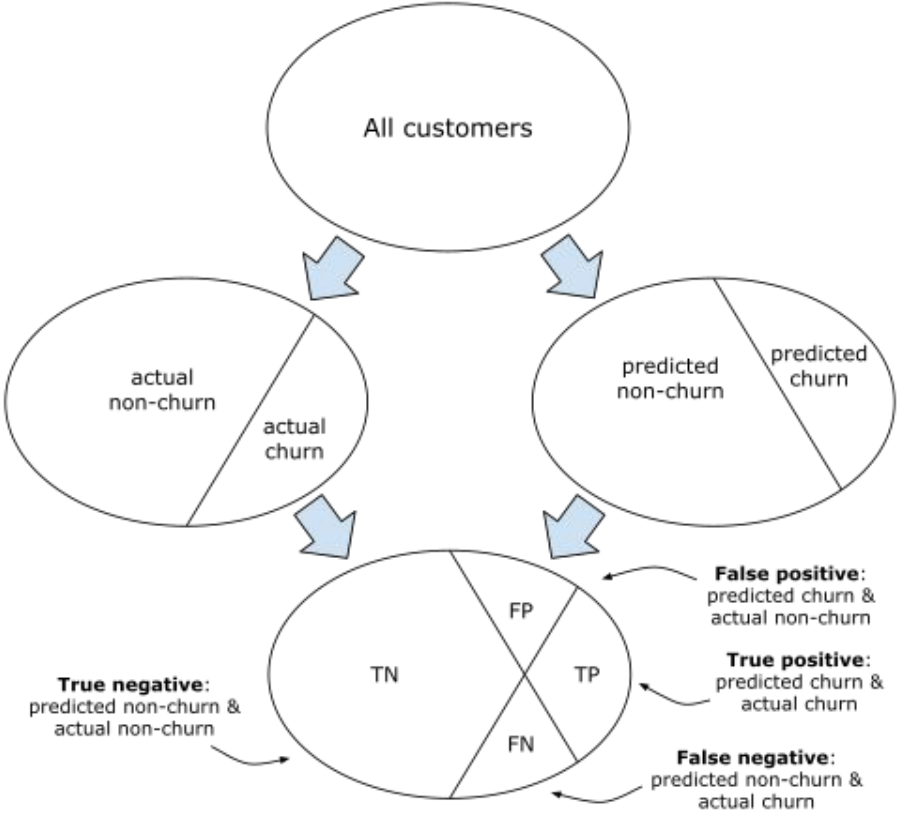
Churn: 85%

https://github.com/alexeygrigorev/mlbookcamp-code/blob/master/chapter-03-churn-prediction/03-churn.ipynb

Image source

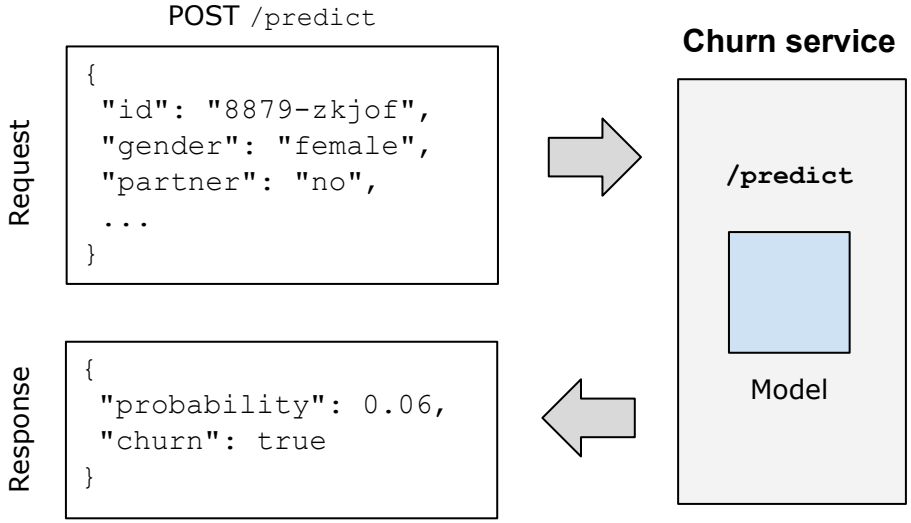
Session 4: Evaluation





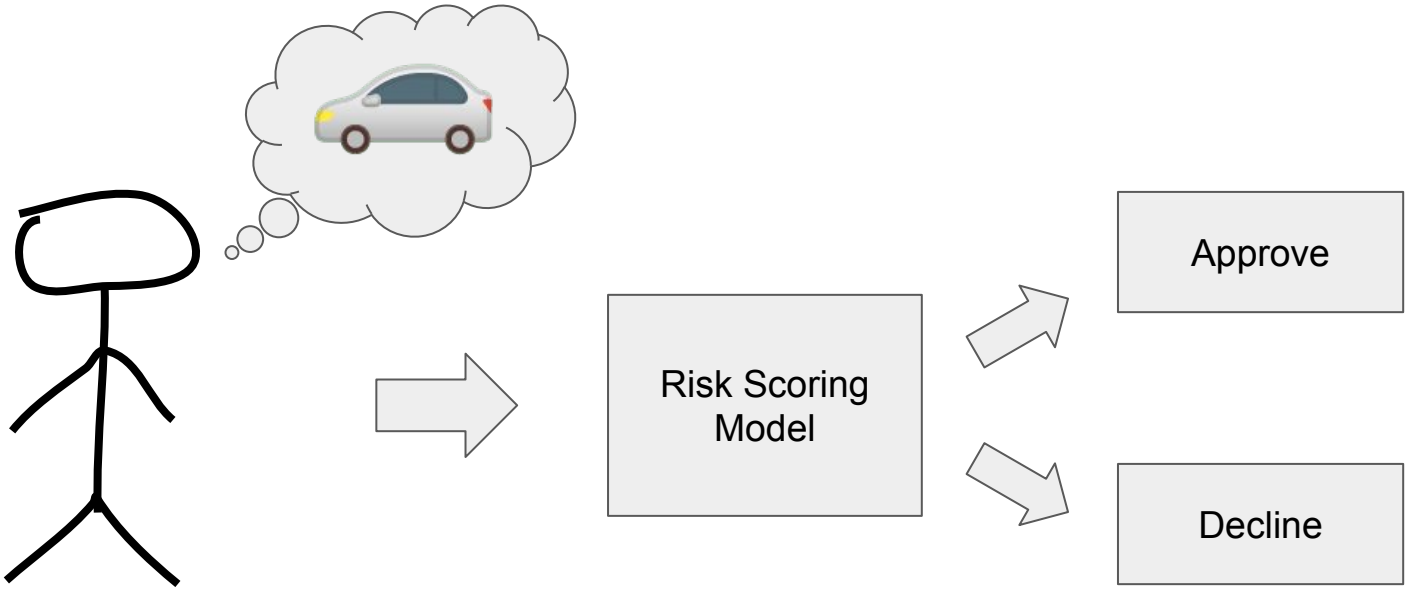
https://github.com/alexeygrigorev/mlbookcamp-code/blob/master/chapter-03-churn-prediction/04-metrics.ipynb

Session 5: Deployment



https://github.com/alexeygrigorev/mlbookcamp-code/tree/master/chapter-05-deployment

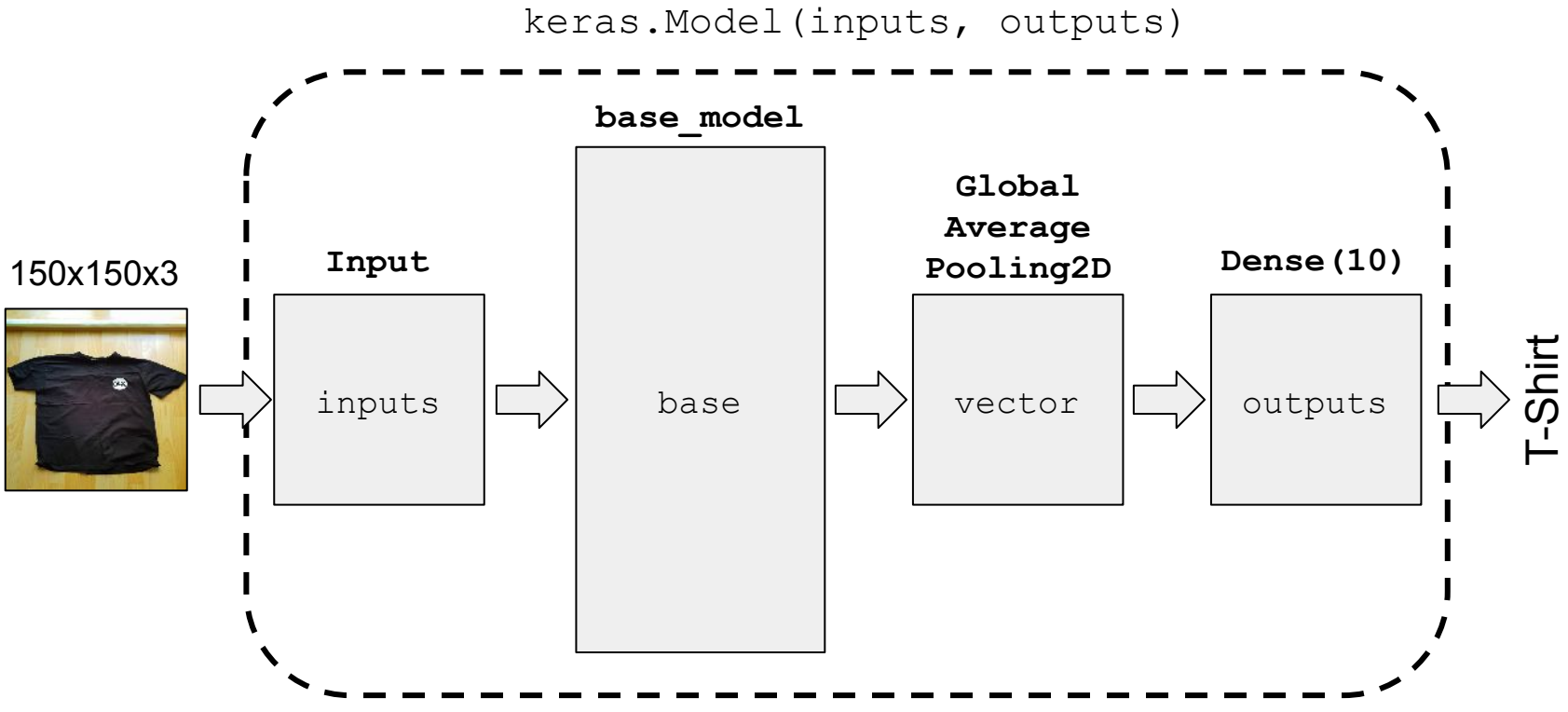
Session 6: Credit Risk



https://github.com/alexeygrigorev/mlbookcamp-code/blob/master/chapter-06-trees/06-trees.ipynb

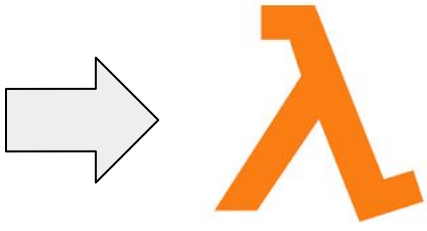
Midterm project

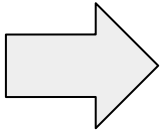
Session 8: Image Classification



https://github.com/alexeygrigorev/mlbookcamp-code/blob/master/chapter-07-neural-nets/07-neural-nets-train.ipynb

Session 9: Serverless Deep Learning

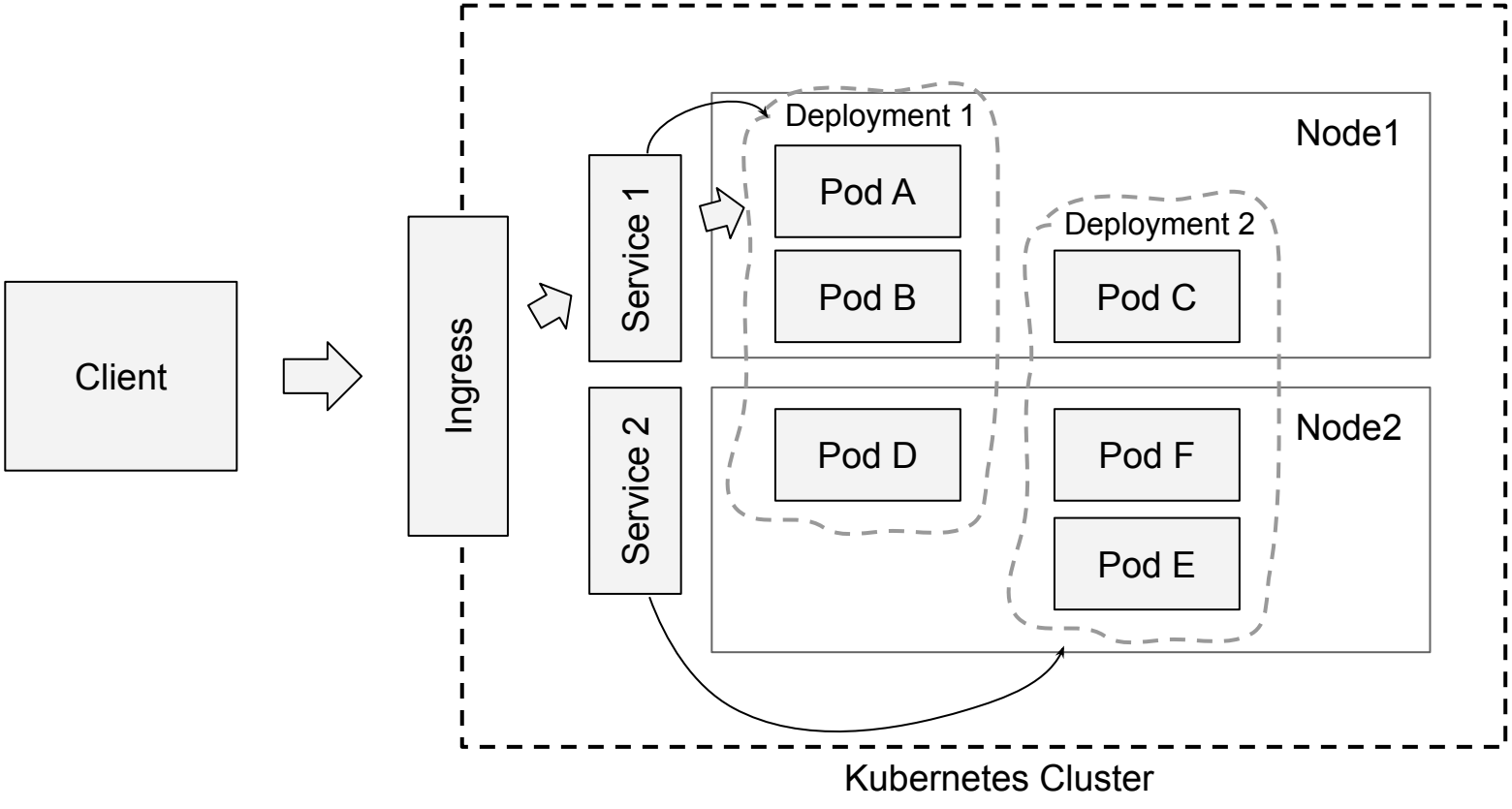




```
{
  "tshirt": 0.9993,
  "pants": 0.0005,
  "shoes": 0.00004
}
```

https://github.com/alexeygrigorev/mlbookcamp-code/tree/master/chapter-08-serverless

Session 10: Kubernetes



https://github.com/alexeygrigorev/mlbookcamp-code/tree/master/chapter-09-kubernetes

Session 11: Kubeflow

Pants

Transformer

Pre-processing
(resize/process images)

Post-processing
(transform predictions)

Pre-processed image

Raw predictions

Model
(Make predictions)
KFServing

https://github.com/alexeygrigorev/mlbookcamp-code/tree/master/chapter-09-kubeflow

Capstone Project

Article

Course logistics

Logistics

- First session - live on YouTube
- Other sessions - live in Zoom *
- Everything will be recorded
- On Mondays
  - We work through the homework together
  - Answer questions
- To get a certificate, you need to complete two projects
- You can join the course at any time

* depends on the number of participants

Leaderboard

- For each homework question you get 1 pt
- Projects - 15 pt
- Article - 20 pt
- The leaderboard with top 100 participants will be published on the course github (without scores)

Your email (the same you used for signing up) *

Should be the same everywhere

Your answer

Question 1: Version of NumPy *

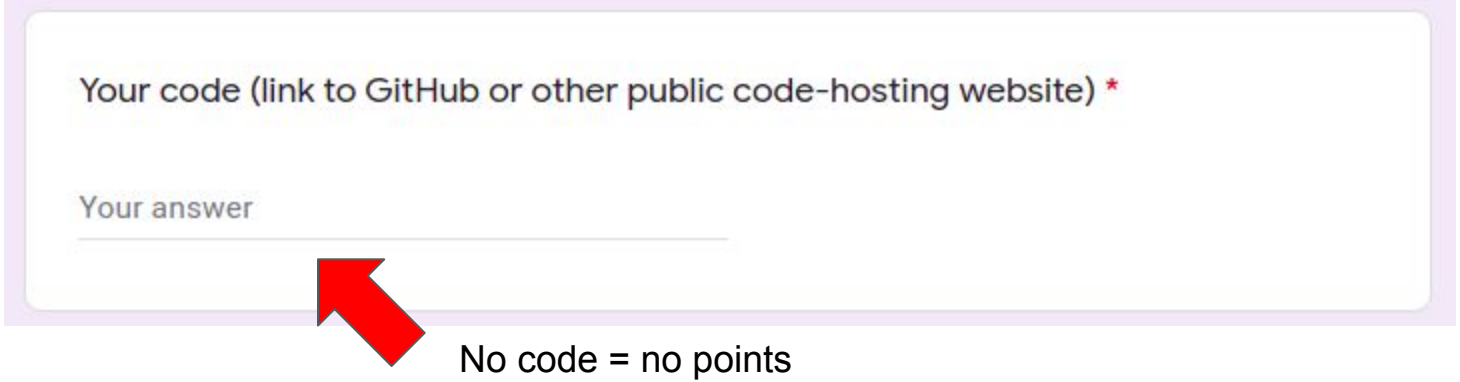
Your answer

Question 2: Version of Pandas *

Your answer

Question 3: The average price of BMW *

- ◯ 71476.22
- ◯ 85255.55
- ◯ 61546.76
- ◯ 28102.38

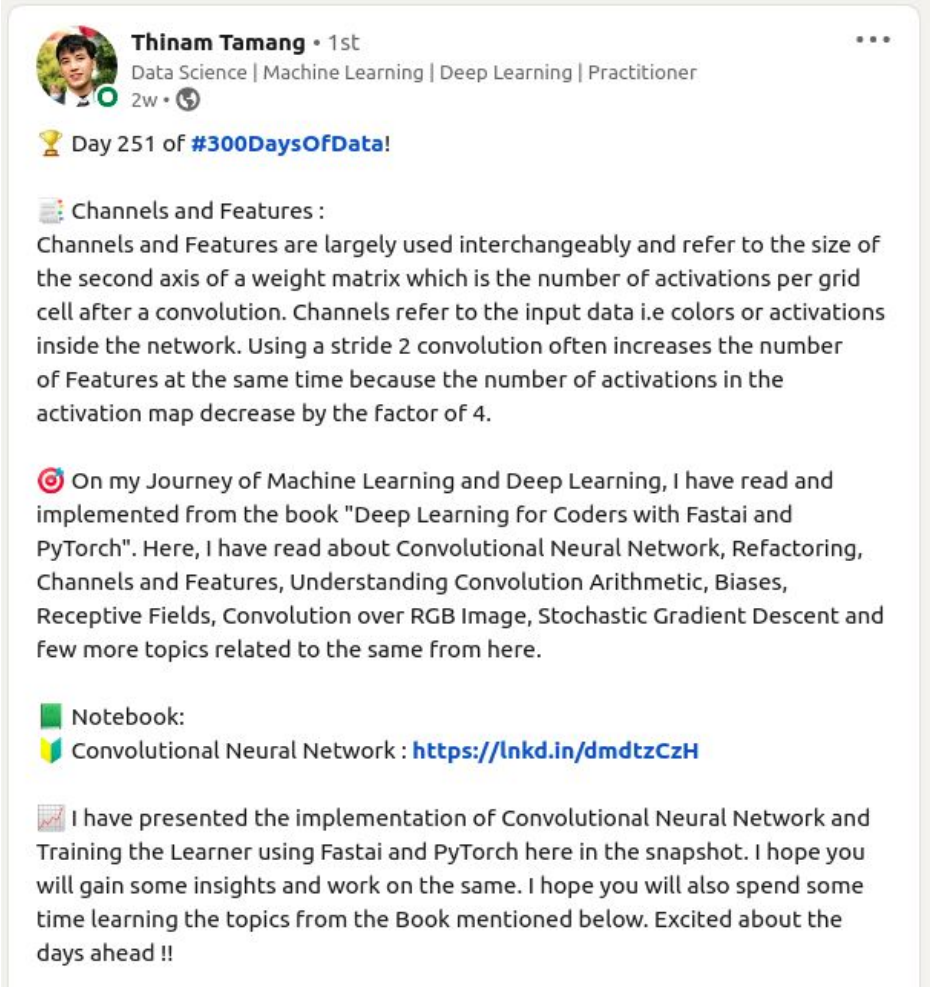


No code = no points

Learning in public

Share your progress!

- #learning-challenges in Slack
- LinkedIn
- Twitter



Thinam Tamang • 1st
Data Science | Machine Learning | Deep Learning | Practitioner
2w •

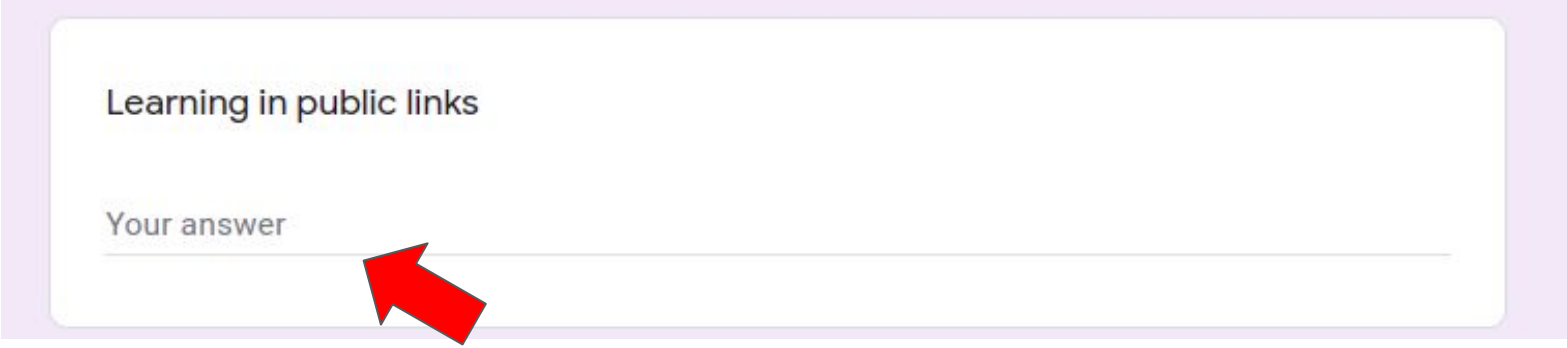
🏆 Day 251 of **#300DaysOfData**!

📑 Channels and Features :
Channels and Features are largely used interchangeably and refer to the size of the second axis of a weight matrix which is the number of activations per grid cell after a convolution. Channels refer to the input data i.e colors or activations inside the network. Using a stride 2 convolution often increases the number of Features at the same time because the number of activations in the activation map decrease by the factor of 4.

🎯 On my Journey of Machine Learning and Deep Learning, I have read and implemented from the book "Deep Learning for Coders with Fastai and PyTorch". Here, I have read about Convolutional Neural Network, Refactoring, Channels and Features, Understanding Convolution Arithmetic, Biases, Receptive Fields, Convolution over RGB Image, Stochastic Gradient Descent and few more topics related to the same from here.

📗 Notebook:
🔰 Convolutional Neural Network : **https://lnkd.in/dmdtzCzH**

📈 I have presented the implementation of Convolutional Neural Network and Training the Learner using Fastai and PyTorch here in the snapshot. I hope you will gain some insights and work on the same. I hope you will also spend some time learning the topics from the Book mentioned below. Excited about the days ahead !!

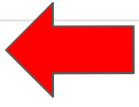


+1 pt for each social link / article

1.3 Supervised Machine Learning

- Video
- Slides

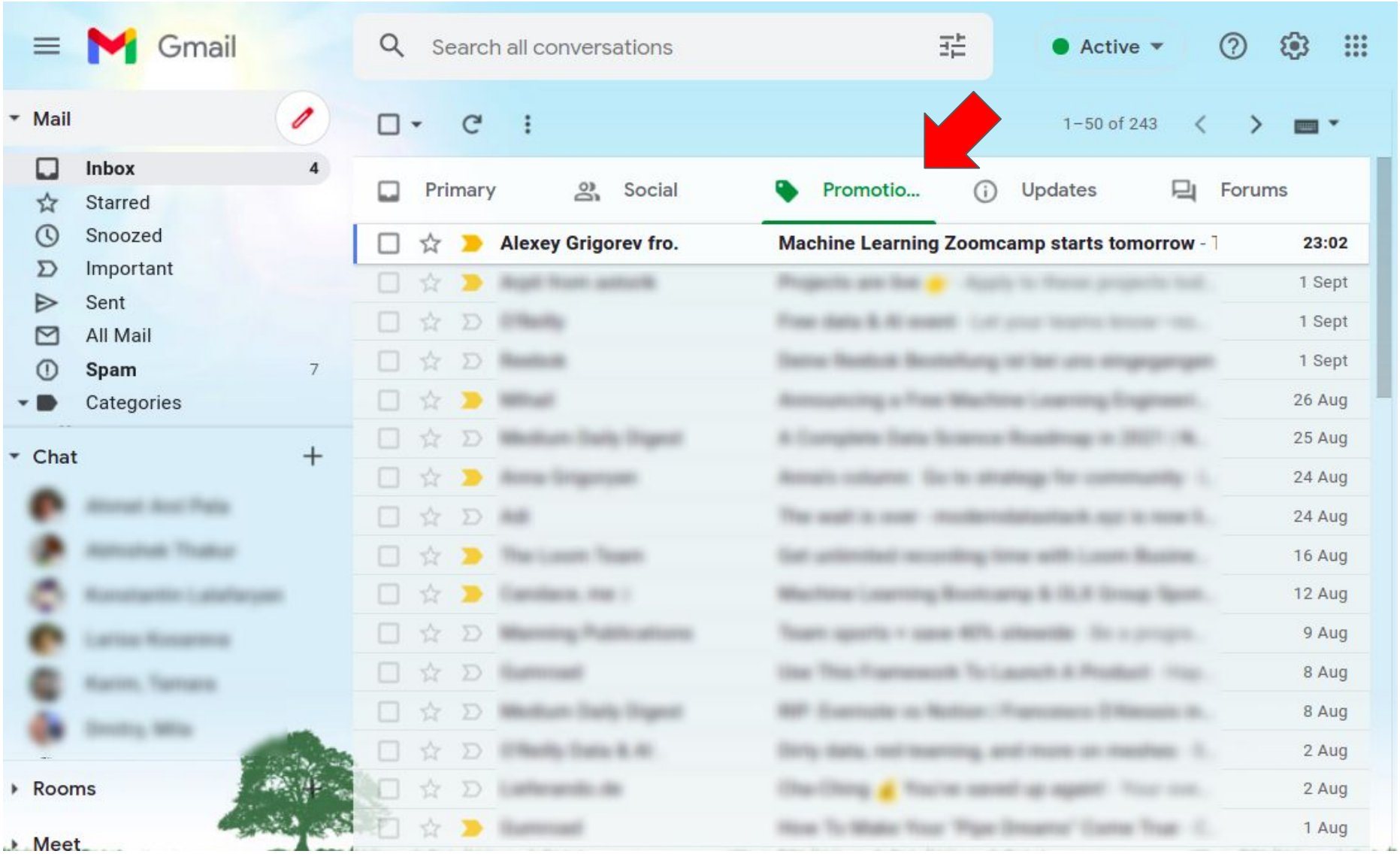
Notes



PRs with links to Notion, medium, your github repos, etc are welcome!

Navigation

- Lesson 1: Introduction to Machine Learning
- Previous: ML vs Rule-Based Systems
- Next: CRISP-DM


Gmail
Search all conversations
Active
Mail
Inbox 4
Starred
Snoozed
Important
Sent
All Mail
Spam 7
Categories
Chat
Rooms
Meet
1–50 of 243
Primary
Social
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Updates
Forums
Alexey Grigorev fro.
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23:02
1 Sept
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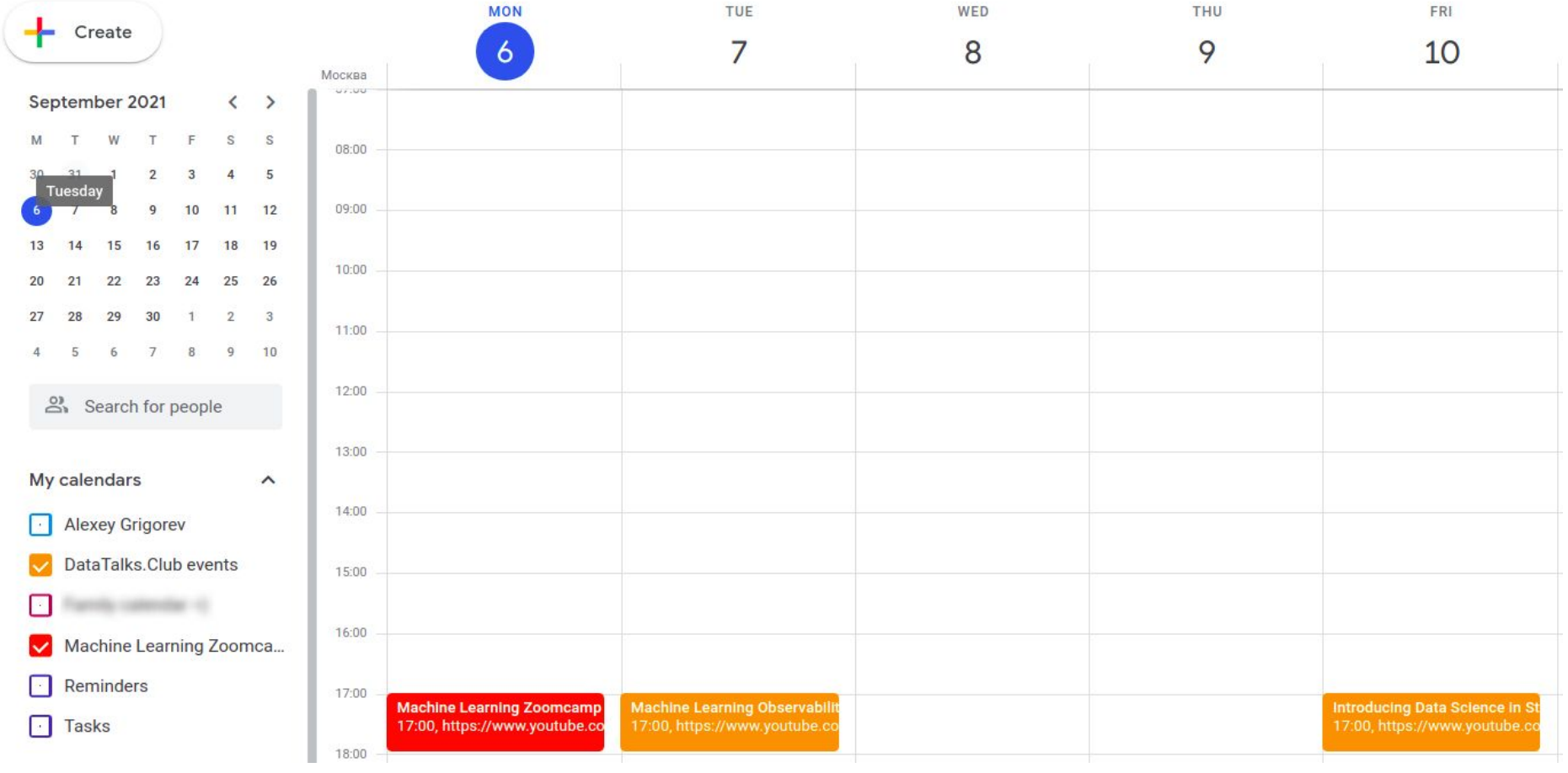
Create
September 2021
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30 31 1 2 3 4 5
Tuesday
6 7 8 9 10 11 12
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20 21 22 23 24 25 26
27 28 29 30 1 2 3
4 5 6 7 8 9 10
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TUE 7
WED 8
THU 9
FRI 10
Москва
08:00
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Introducing Data Science in St
17:00, https://www.youtube.co

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More

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shameless-promotion
welcome
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Direct messages
Slackbot
Alexey (Test Account...
Add teammates

course-ml-zoomcamp

1,007

5 Pinned + Add a bookmark

Today

Alexey Grigorev 9:51 AM
The link for today - https://www.youtube.com/watch?v=EReOX7Fi2fE
See you in ~7 hours

YouTube | DataTalksClub
Machine Learning Zoomcamp - Learn Machine Learning Engineering in 4 months!

🔥 9 🙋‍♀️ 2 😃 2 👍 1 Learn more about reactions

Message #course-ml-zoomcamp

Joining DataTalks.Club Slack

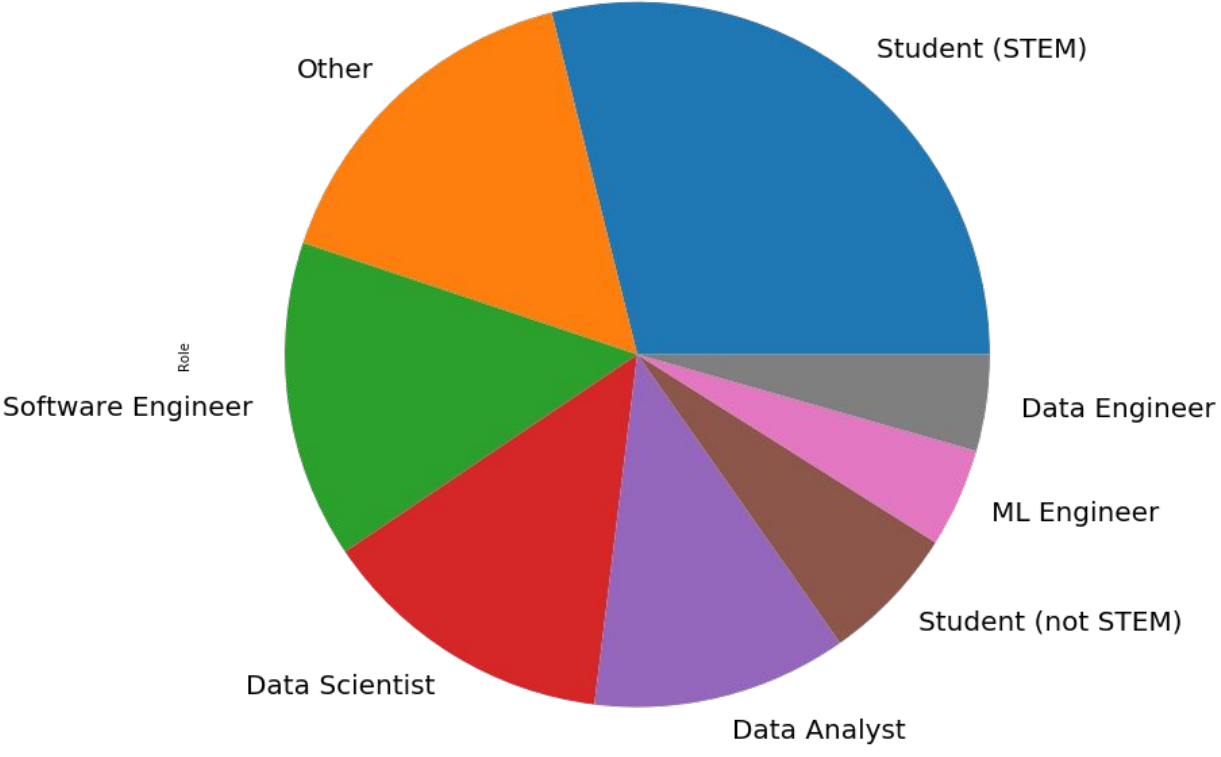
Demo =)

DataTalks.Club Guidelines

- Use #course-ml-bookcamp for course questions
- Use threads
- Don’t post the same message in multiple channels

https://datatalks.club/slack/guidelines.html

Some stats (6k+ registrations)



Win ML Bookcamp!

Go to @Al_Grigor for details :)

Join at

slido.com

#MLZ