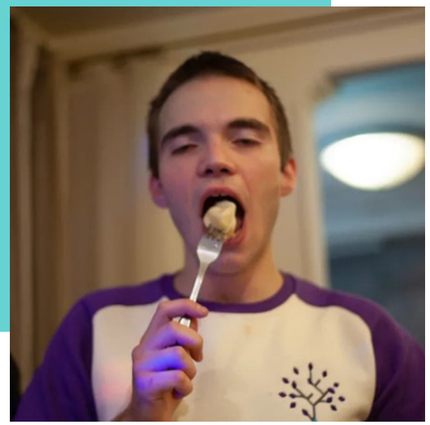
FIRST TIME

team
band
of like-minded
from 812

THE TEAM

ALEXEY CHAIKA

Kotlin/Spring,
Full Stack



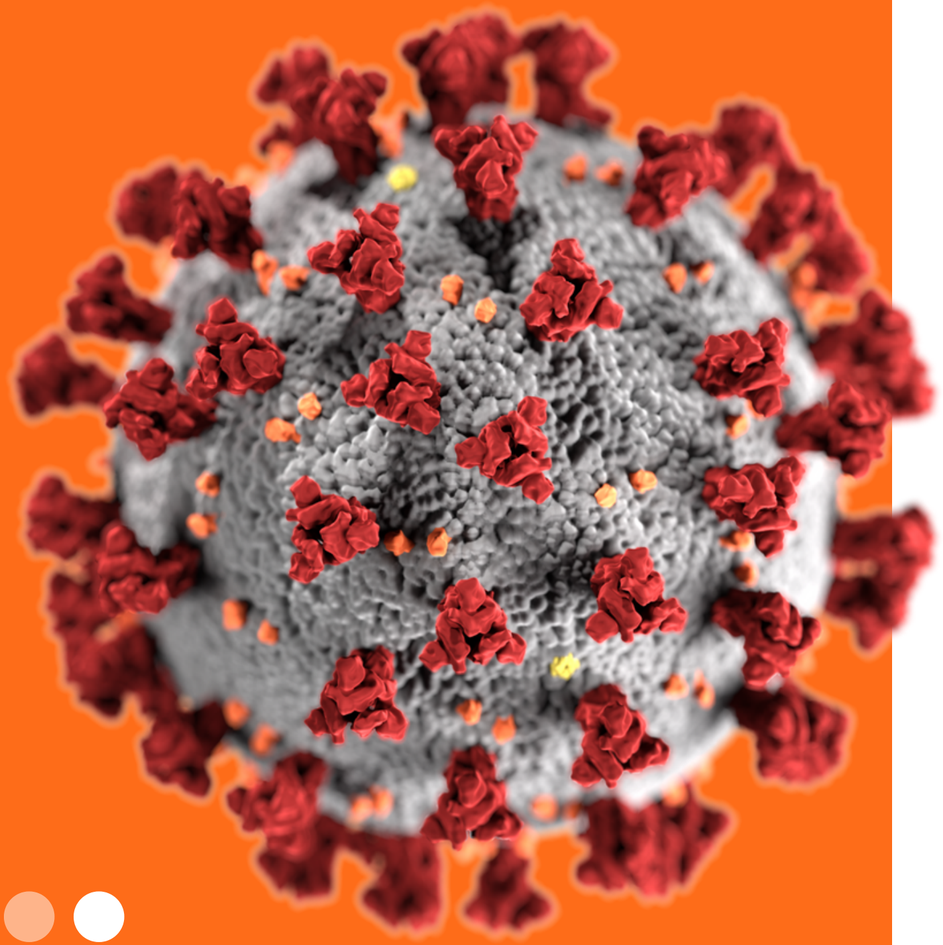
ANTON CHANGALIDI

Python/ML
Bioinformatics

ROSTISLAV DAVYDOV

Python/ML

PROBLEMS



1

Difficult to predict the course of the disease (e.g. COVID-19).

2

Complicated confirmation of **medical certificates**.

3

Different systems for **different** tasks.

BIG IDEA

1

Machine Learning and **Stochastic Optimization** for prediction of:

- **severity**
- **probability of death**
- **duration of illness**

2

System for uploading and confirmation of certificates (perfectly - **non-fungible token**)

3

Unified system for (almost) **EVERYTHING**

DATA

- Datasets from the internet - a big deal: need access.
- Almost have access to data of Centers for Disease Control and Prevention.

C

CDC IMS 2019 NCOV Response AskSRRG <eocevent394@cdc.gov>
20.03.2021, Сб, 2:37
Кому: Чангалиди Антон Ильич

Greetings from the USA. Hope things in St. Petersburg are going well.

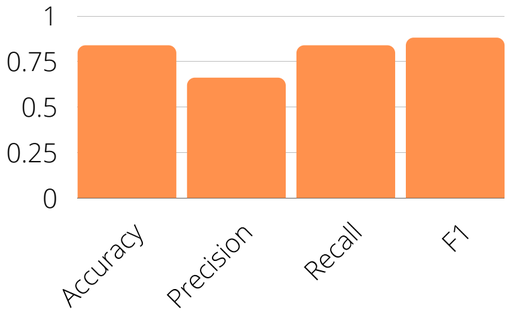
Please go to the link below and follow the access instructions in the meta data under "more" towards the top of the page.

- Used our own data (560 patients):
  - general information (sex, age, etc.)
  - the course of the disease
  - medical analysis
- Learned methods for generating healthcare data (PATE-GAN, medGAN).

RESULTS

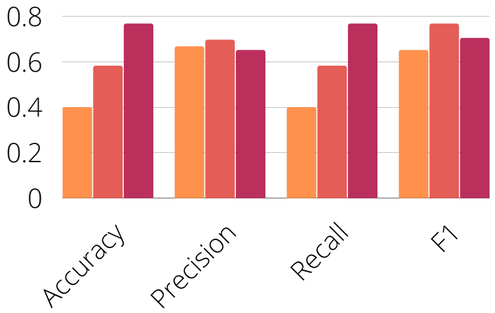
Death prediction:

- Binary classification
- Model: Ensemble of Logistic Regression, Support Vector Classifier and Gradient Boosting Classifier



Severity prediction:

- 3 classes: light, middle, high
- Model: Tree-based Pipeline Optimization Tool (TPOT) Classifier



Duration of illness:

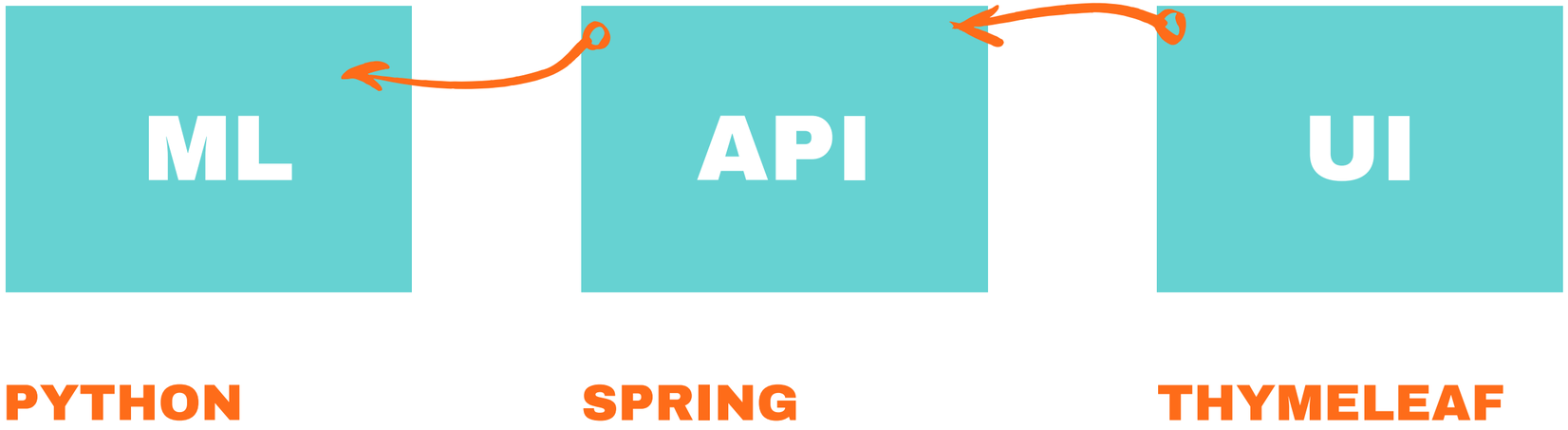
- Duration in days
- Model: Gradient Boosting Regressor
- MAPE: 0.24

- https://github.com/EpistasisLab/tpot

IT'S SHOWTIME!

Demostrating...

HOW DOES IT WORK?



FUTURE WORK

- GANs for generating medicine datasets.
- CV for checking documents.
- NFT for identifying passports.

1

Monetization:

- free prediction (to popularize product).
- paid services for QR-passport generating and usage.

2

CONTACT US

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