

Package

DEEP LEARNING



DESCRIPTION

The ever-growing flow of digital data is a potential asset that can increase company revenues and monetize previously unused sales channels. Nevertheless, it is far from always possible to quickly test hypotheses based on the dataset available to the business. The reasons may vary: lack of free time, increased complexity of the necessary mathematical apparatus, problems within the data itself or simply lack of the required sample volume for correct training etc.

Therefore, the question arises: how to quickly understand which tasks can be solved with the available data (*if so, how and for how long*), and which ones are not even worth trying?!

That is why our Center offers quick outsourcing testing of your hypotheses for making forecasts using deep learning architecture.



Is it possible to teach a model to automatically find defective goods in production?



Is it possible to train a neural network for face recognition?

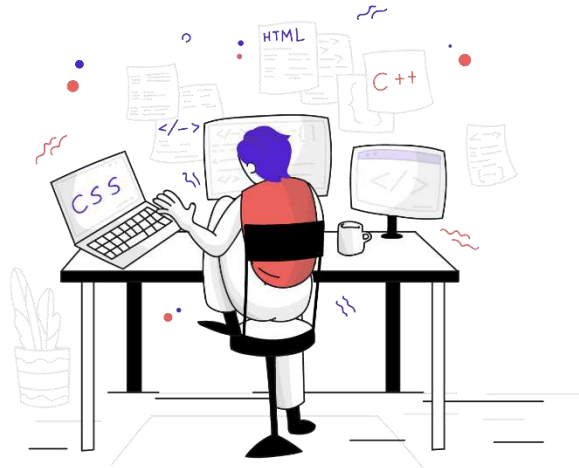


How to evaluate customer satisfaction from your service or product based on comments?

Our team answers these (**and not only these**) questions by working with your data using deep learning algorithms.

We provide expert and scientific support for the work of analytical department in your company.

Where you have problems with the use and adaptation of deep learning algorithms to the available data - our Center is ready to help with the solution and offer the scientific approach with detailed documentation.



PACKAGE CONTENT

- 1 Architecture selection for solving a problem
- 2 Data preprocessing in accordance with the chosen architecture
- 3 Testing the solution quality
- 4 Initial analysis of available data
- 5 Final report in .ipynb and .pdf/.docx formats

DURATION



up to 14 days

(if client has marked data)



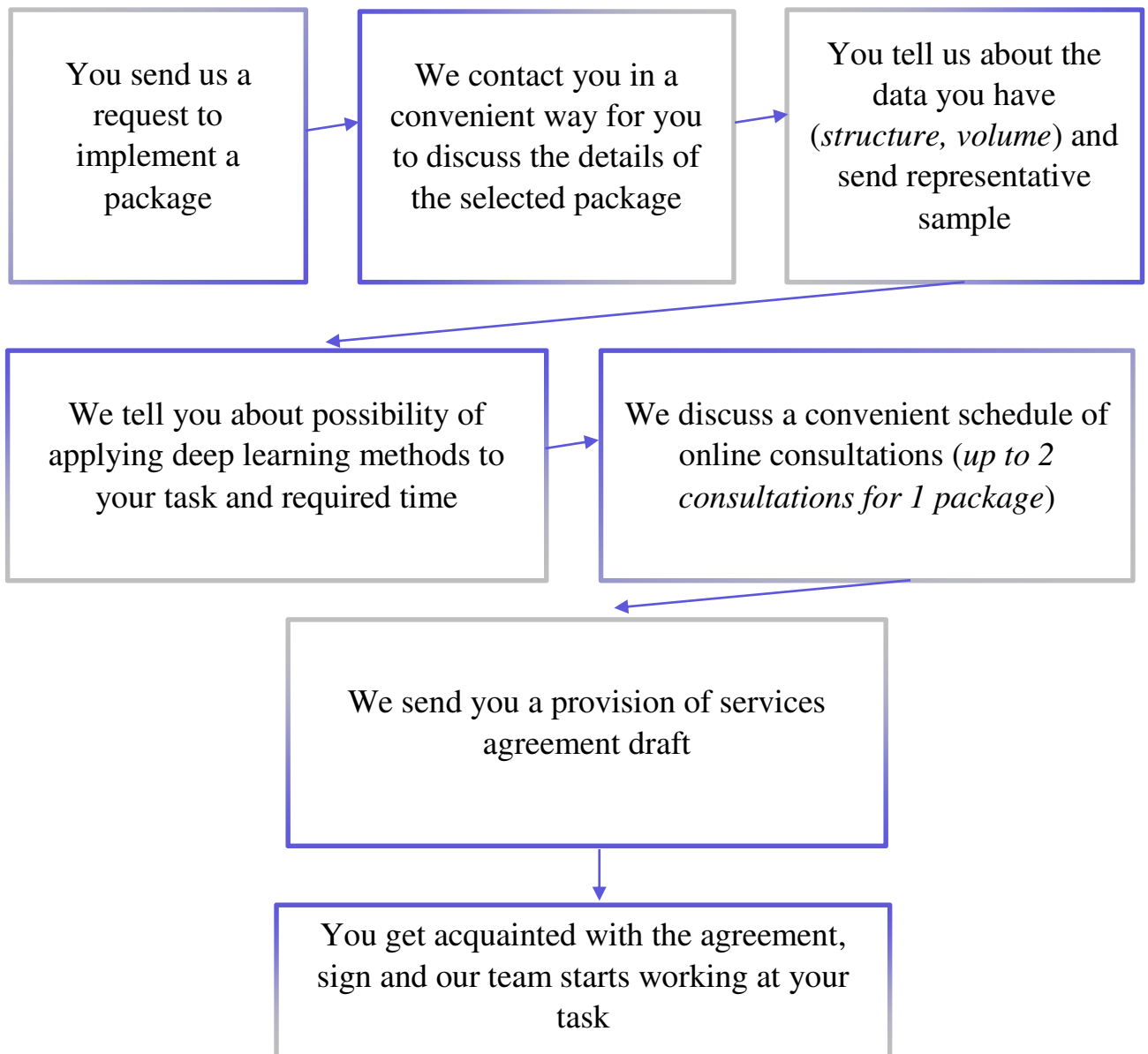
up to 28 days

(if client provides data for marking)

P.S. If there is no sample and our team needs to independently collect and mark up the dataset, then the terms are discussed individually



INTERACTION WITH CLIENT





WORKFLOW

If client provides marked data

+5

Our analyst team work on carrying out all the above stages of the package within 5 working days

+1

After that, within 1 days, a code review of the work results takes place together with the project manager

+2

Within 2 days, a final report is drawn up with a detailed description of working with data (*preprocessing features, selection of architecture, testing the quality of the solution, visualization of analysis etc.*)

+2

Next, the final models and work results are transferred to the client through the GitHub repository. For 2 days, the project manager interacts with the client (*answers to questions*)

WORKFLOW

If client provides data for marking

+12

Our team of analysts work on the data marking, as well as all the above stages, within 12 working days.

+2

After that, within 2 days, a code review of the work results takes place together with the project manager

+3

Within 3 days, a final report is drawn up with a detailed description of working with data (*preprocessing features, cleansing data, testing models, visualizing analysis, etc.*)

+5

Next, the final models and work results are transferred to the client through the GitHub repository. For 5 days, the project manager interacts with the client (*answers to questions*)

ARCHITECTURE OF DEEP LEARNING

During the building a predictive system, our team will find the most suitable architecture from the classical algorithms. We can implement and retrain:

- Convolutional neural network (CNN)
- Recurrent neural network (RNN)
- Long short-term memory (LSTM)
- Recursive neural network (RvNN)

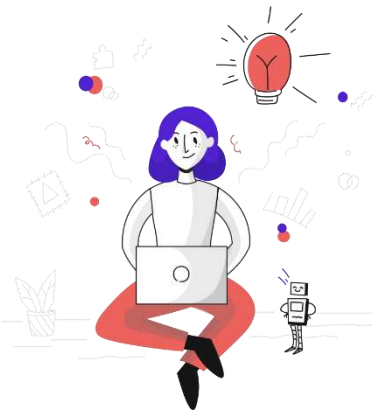
You can also suggest an algorithm for testing

LIST OF METRICS

After building a predictive system, we evaluate the quality of work using various metrics:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Accuracy | <input checked="" type="checkbox"/> R^2 |
| <input checked="" type="checkbox"/> MSE | <input checked="" type="checkbox"/> F1 score |
| <input checked="" type="checkbox"/> Precision | <input checked="" type="checkbox"/> RMSE |
| <input checked="" type="checkbox"/> MAE | <input checked="" type="checkbox"/> AUC-ROC |
| <input checked="" type="checkbox"/> Recall | <input checked="" type="checkbox"/> AUC-PR |

You can also suggest metric for testing



ABOUT SERVICE SUBSCRIPTION

Our Center provides individual sets of services presented in the form of packages. In cases where the client's task or hypothesis requires longer work (*more than 14 days*) - we inform about this at the stage of discussing the available data (*before signing the provision of services agreement*) and propose to extend the selected package up to 28 days

Also, if after selected package ending, the employees of your company need:

- > more time for formal and expert analysis of the model developed by us
- > test new hypotheses that emerged from the analysis of our final model
- > retrain the final model with additional data

then you can always extend the selected package for another 14 days or conclude a contract for permanent service.

CONFIDE DIFFICULT TASKS TO COMPETENT SPECIALISTS

