

AI-based Solution for Quick and Precise Data Processing Using Machine Learning Algorithms

Case study

Customer Profile

The Customer is a State Institution engaged in social studies. The organization processes thousands of questionnaire forms in order to receive up-to-date data on many socially significant topics.

Goals and Challenges

Manual processing of questionnaire forms is a time and money consuming process. Besides, human attention declines exponentially each time he/she starts another analysis iteration.

The project mission was to develop a model that manages to process questionnaire forms more effectively than a human does and ensures the desirable accuracy percentage.

Business Objectives

- 1 Create and train a model to process big array of data contained in questionnaire forms
- 2 Reduce money costs required to process the data
- 3 Increase the accuracy percentage of the processing results
- 4 Ensure that the model can be adjusted for use in adjacent subject areas

Project Overview

The Customer wanted to create a model to process the data from different socially-oriented questionnaires. For this purposes, Qulix Systems proposed and developed an AI solution.

Our team harnessed machine learning algorithms, tested several approaches to train neural networks and finally chose the option, which worked optimally for this case.

Project Stages

1 Data analysis: data completeness and quality assessment, data separation

2 Data pre-processing: includes several techniques such as transformation, reduction and cleaning

3 Processing and selection of a computing model

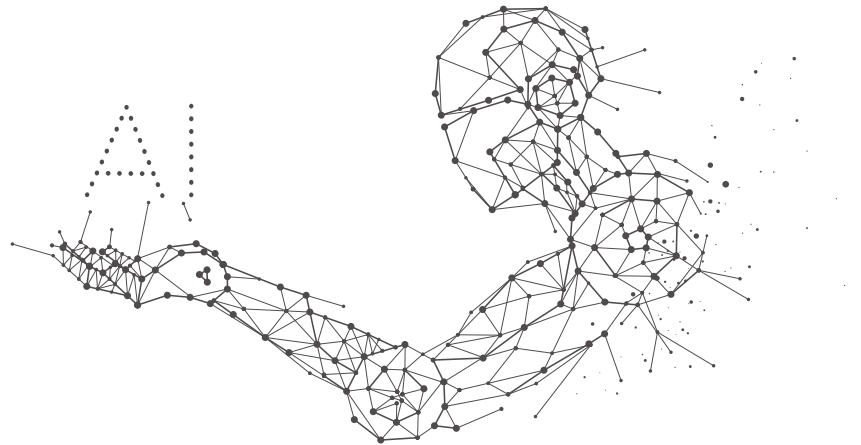
4 Post-processing, product preparation: shell program or Proof of Concept

Result

Qulix Systems developed the solution, which met Customer's requirements and facilitated data processing. The AI-based solution outperforms the human operators in terms of speed and results accuracy and allows impressive reduction in labor and time costs.

Tools and Technologies

- Python
- Jupyter



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