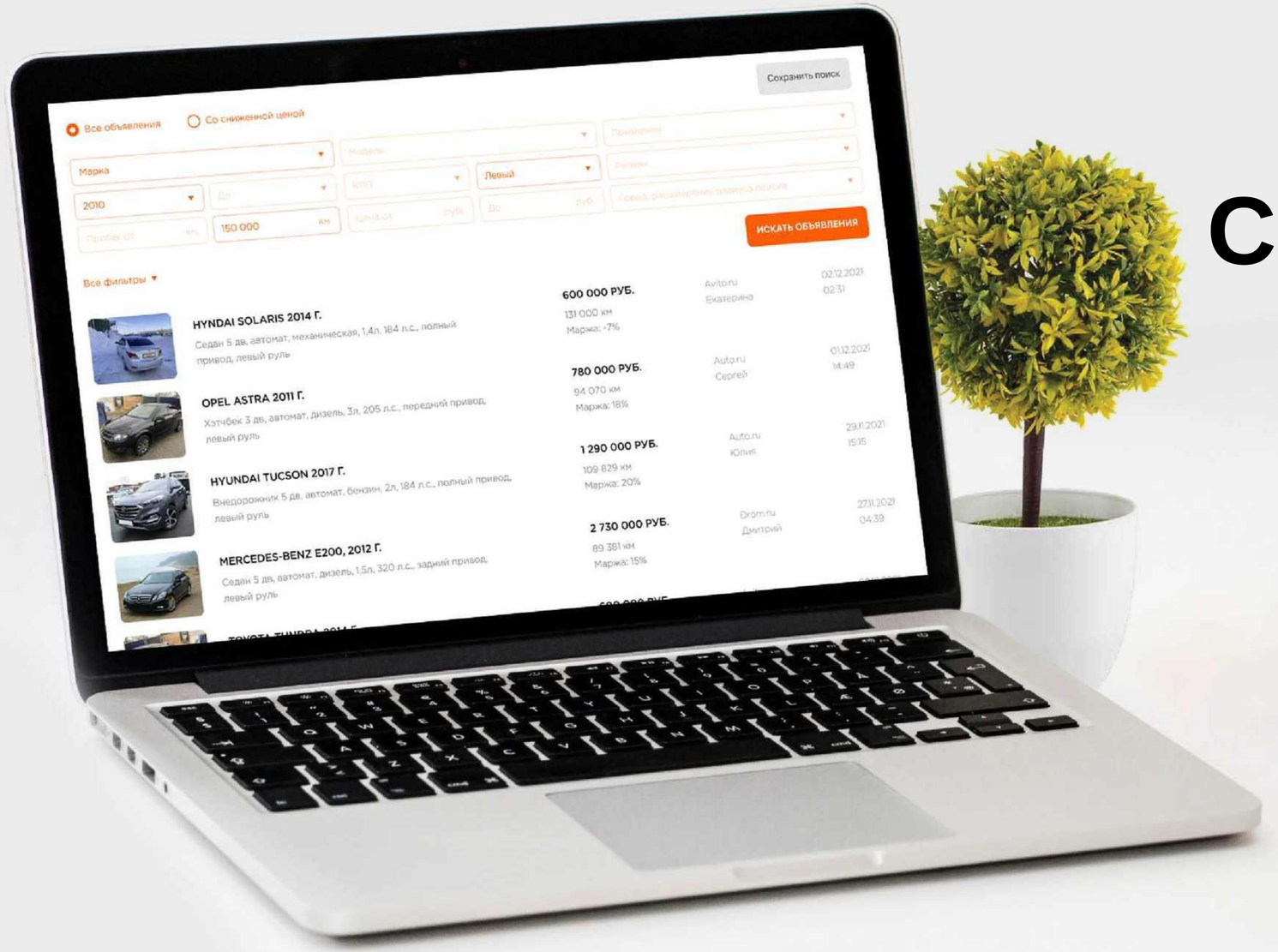
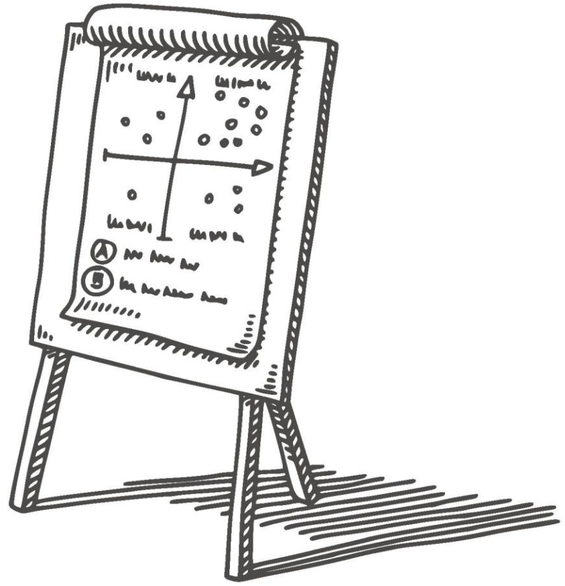
carmart

Car price calculator



Current situation

- Evaluator's subjective opinion leads to losses and lost profits
- Lack of control reduces efficiency and facilitates corruption during repurchase and sale
- High dependency of business on competence of people makes it difficult to scale the business
- Market volatility makes it difficult to use historical proprietary sales data for evaluation and decision-making
- Lack of real-time analytical reports that show the market availability of cars in our categories
- Lack of a recommendation system (AI) aimed to predict the best value to repurchase a car and then to sell it, as well as the cost of optimal repair works based on big data analysis



Lack of clarity and validity of the results of the process of forming the repurchase and sale price of used cars has a negative impact on the customer experience, increases the number of errors in evaluation, which results in low business efficiency in general.

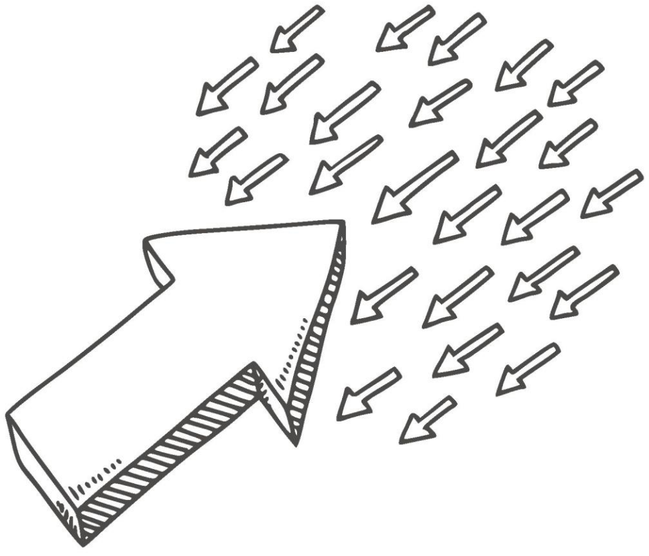
Evaluation accuracy of manual pricing management

Received for the period from September 1, 2021 to October 31, 2021: 458 cars (repurchase+used TI)

Final conclusions for the current manual management based on the sample:

1) Absolute forecast accuracy (fallen within the optimal period and planning margin) is achieved in **9.6%** of cases (44 cars out of 458)

2) Relative forecast accuracy (fallen within either the optimal period or the planned margin) is achieved in **36%** of cases (165 cars out of 458). Overall, the model accuracy level (absolute + relative) was **45.6%** with a significant rate of relative accuracy.



Purpose

Ensuring accuracy and transparency of used car evaluation results by creating an advisory system (AI) as a set of algorithms, programs and services that provide the ability to manage used car pricing processes.

Objectives

- Data collection to provide in-depth analysis of used car market and generate predictive and optimization models
- Data analysis, identification of dependencies and trends
- Generation of predictive and optimization models for market analysis, purchase price and sale price, as well as optimal composition and cost of repair works
- Formation of broad and deep market and demand analytics regardless of the country of implementation
- Generation of accurate assessment of the purchase price taking into account the sale price forecast
- Implementation of tools for flexible management of pricing strategies
- Provision of guarantee for a transparent and reasonable market offer
- Provision of guarantee for technical and legal purity of transaction
- Real time tracking of all purchase transaction stages
- Search and analysis of all offers from all major sites
- Assessment of liquidity and average speed of car version sale on the market;
- Prediction of the most probable sale price taking into account the car’s characteristics and liquidity
- Inter-regional sales analysis
- Purchase price substantiation for the client based on objective market data
- Inventory analysis and recommendations for its optimization
- Analysis of required optimal repair and calculation of its cost in order to maximize marginality
- Generation of recommendation system to assist in making managerial decisions based on data analysis and generation of predictive and optimization models

Implementation Benefits

Transparency of pricing processes

Car price evaluation based on a multivariate analysis of car history, its characteristics and market state, as well as preparation of the proof report substantiating the evaluation results

Sales Strategy Configuring

Simulation of optimization and predictive sales models with the ability to configure simulation parameters

Stock reserve analysis and optimization-related offers

Formation of an “ideal warehouse” based on real-time monitoring of prices, market saturation and turnover

Recommendation system

Formation of proposals for price adjustment and stock management based on BigData deep analysis and forecasting using machine learning technologies

Business profitability increase (ROC, ROI, ROE)

CAPEX decrease

Opportunity to operate with minimal working capital

Marketing Costs Reduction

Reduction of personnel by reducing qualification requirements

Qualitative evaluation of 100% vehicles, assuming that certain groups of vehicles may be less accurately estimated

Target audience

B2B

Potential b2b customers are participants of the used car market who are interested in maintaining their current business and increasing its profitability or in building it up without large investment resources.

B2C

Potential b2c customers are young persons (male or female – it does not matter) under 35-40 years old who are interested in selling or exchanging a used car on the basis of a clear fair offer for the price of the car.

Competitive analysis

Disadvantages of competitors' solutions

- Primitive ad-gluing algorithms that do not allow for more accurate ad-gluing
- Lack of algorithms for considering parameters of own stock when estimating car value
- Lack of sufficient quantity and quality of data on the used car market for complete and in-depth analysis, as well as construction of forecast models
- Insufficient number of different sales strategies and evaluation algorithms embedded in the strategy
- Lack of a recommendation system for selecting a selling strategy, car evaluation algorithm
- Insufficiently deep analysis of the market in terms of periods and market needs
- Absence of algorithms for estimation and analysis of car's value in current condition and considering possible repair in different configurations
- Lack of a recommendation system to assist management decision-making using AI technology
- “Manual” analysis of audio calls records
- Lack of AI algorithms when making calls

Differences

The analysis of foreign and domestic solutions shows that the qualitative advantage of foreign solutions in ensuring accuracy and clarity of evaluation is the use of multivariate data analysis and machine-learning technologies.

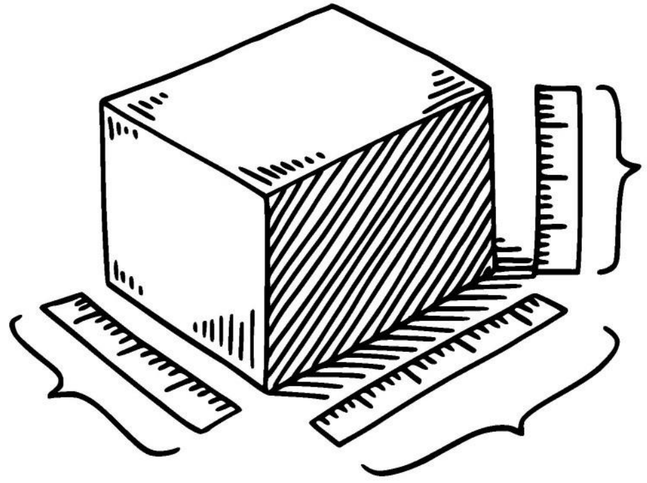
edmunds

haraba MaxPoster

Competitive analysis

Competitive advantages of the Calculator being created

- Auto VIN decoding
- Automatic competitor traffic monitoring and comparison in terms of brand/model, price adjustment based on competitors' data
- Automatic consideration of due diligence data and car history in pricing
- Inter-regional sales analysis
- Generation of different pricing models depending on the segment
- Analysis of market history and dynamics, considering the market forecast in terms of repurchase (generation of sales strategies, management and setting up tactics, as well as local objectives)
- Automatic market sales analysis and generation of “ideal warehouse”
- Automatic market analysis by brands and models for supply shortage and surplus, considering deficit in pricing
- Considering the quality parameters of the car when building the market (comparable and radically different volumes of engines, gearboxes, etc.
- Analysis of the optimum repairs needed and calculation of their cost in order to maximize margins
- Recommendation system to assist management decision-making based on the results of data analysis (autopilot mode)
- Recommendation on the sales format: retail or wholesale (auction).



As part of the implementation of the car value estimation software, special attention should be paid to the collection of data for the construction of mathematical models, as well as the implementation of machine learning algorithms. It is necessary to ensure that the necessary and sufficient amount of data is obtained, as it is the completeness of the data that will largely determine the accuracy achieved by the model.

Hypotheses

Implementing machine learning

Machine learning and big data analysis techniques need to be implemented in order to achieve the accuracy of the car repurchase value evaluation and sales price predictions.

Collecting market data

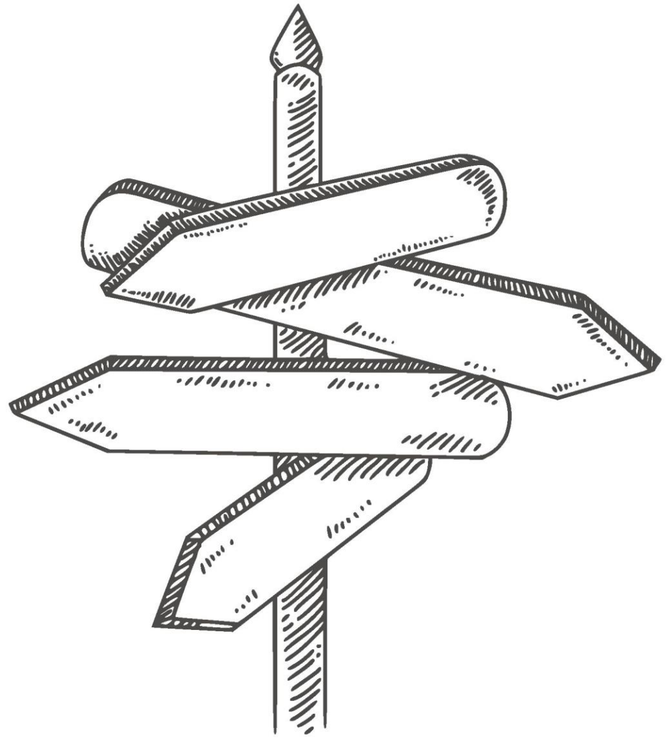
Special attention needs to be paid to the collection of used car market data, as it is the completeness and quality of the data that will determine the achieved accuracy of machine learning models.

Creating mathematical models

A comprehensive approach to the analysis of used car market data is required, thus a number of mathematical models that are interrelated will need to be created.

MVP approach

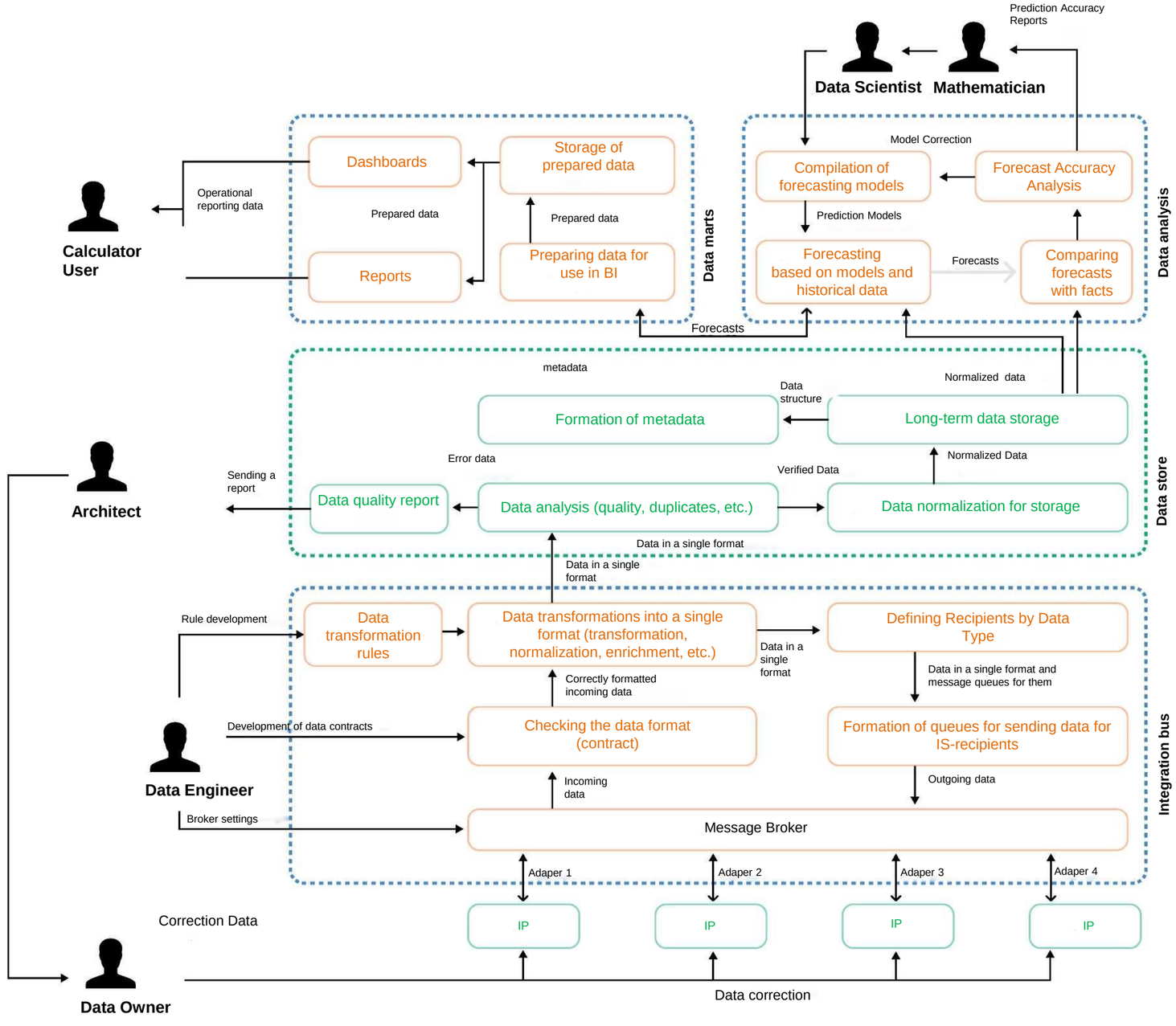
Based on the data collected, dependency analysis and trend identification is carried out and the identified hypotheses are tested within the framework of building machine learning models. Transition to the implementation of the Calculator functionality should be made only when average accuracy is achieved.



Solution

Car price calculator

A set of algorithms, programs and services calculating a reasonable and competitive car purchase price and enabling to configure the strategy for its further profitable sale.



Scope of work

Data collection

Creating a data lake and organizing the entry and storage of retrospective and up-to-date data on market conditions.

Creating a mathematical model

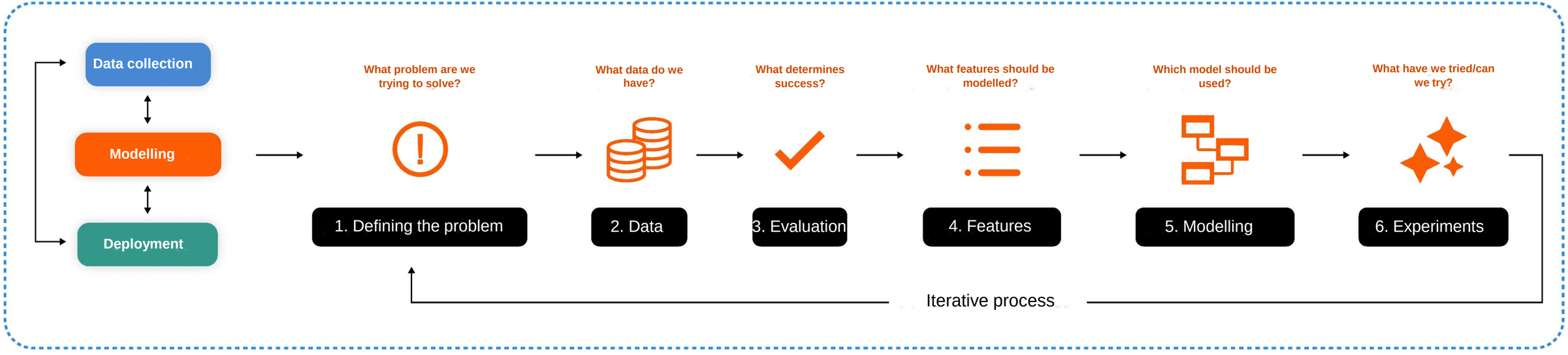
Feature construction, consisting of data recording, statistical processing and transformation to select the features to be used in the model.

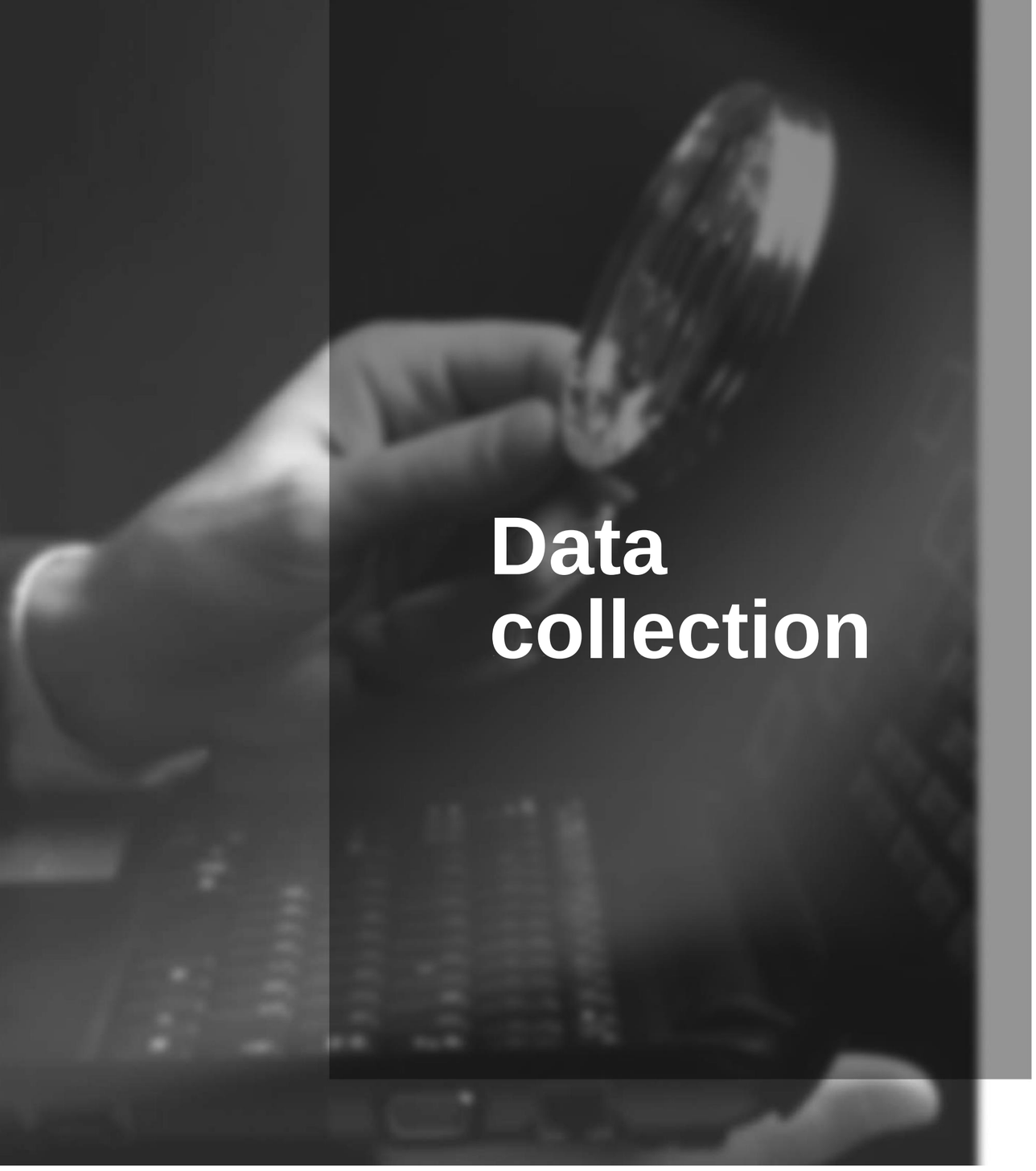
Data normalization and analysis

Designing a sample for subsequent modeling and determining the representativeness of the collected data in relation to the task assigned.

Design and development

According to the traditional approach to software product design, a detailed algorithm for data processing is developed or the composition of objects and their properties, processing methods, events triggering processing methods are specified.





Data collection

Data lake

This is a repository that holds a large amount of “raw” data in its original format until it can be used.

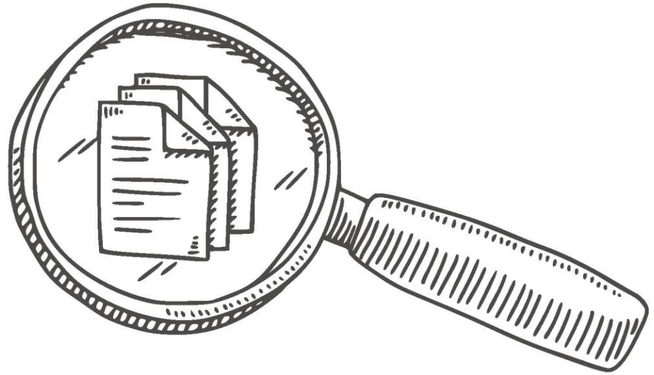
Purpose of creation

It is the study of raw, unaggregated data, with the possibility of applying various analytical techniques to it

Data normalization and analysis

Data analysis includes:

- Designing a sample for subsequent modeling and determining the representativeness of the collected data in relation to the task assigned.
- Examination of central positions
- Constructing variable distribution histograms
- Drawing conclusions on the distribution of data on the required data preparation
- Pair-wise comparison: calculating the correlation between variables

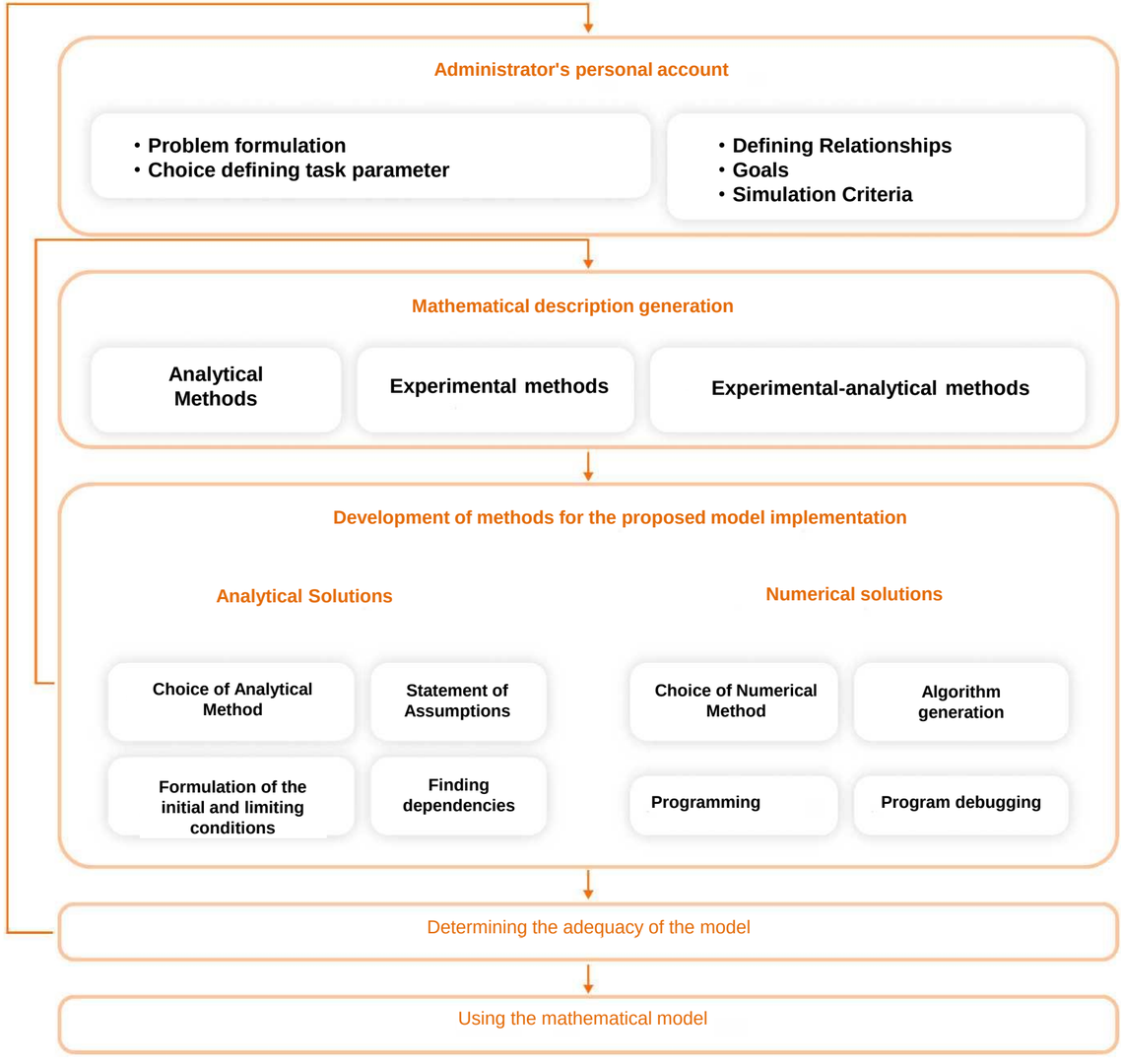


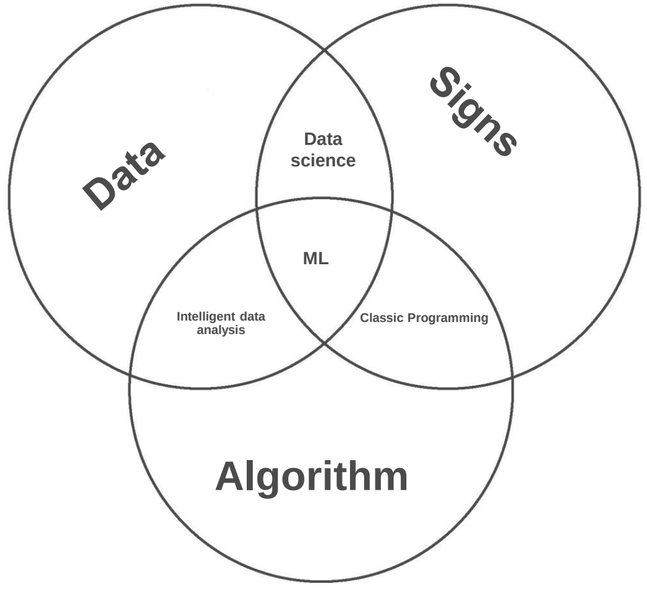
Data normalization is one of the operations of feature transformation that is performed during their generation at the data preparation stage, a preprocessing procedure for input information (training, test and validation samples as well as real data) in which feature values in the input vector are reduced to a certain preset range.

Mathematical Model Generation and Training

A machine learning model is an application of artificial intelligence (AI) enabling to automatically learn and improve from your own experience without explicit human intervention.

- Car purchase price estimation model
- Sales price model
- Car price inter-regional analysis model
- Market dynamics analysis and forecasting model
- Inventory forecasting and optimization model
- Model for identifying repairs and any margin that can be maximized through repairs





Machine learning is built on three pillars

A) Data

The basic information that we usually ask the client to provide. This includes any samples of data that need to be learned by the system;

B) Signs

This part of the work is done in close cooperation with the client. We identify the key business needs and decide together which characteristics and features the system should track as a result of the learning;

C) Algorithm

Selection of a method for solving the business problem. This is a task we solve without the client's involvement, by our staff.

Main types of machine learning

By the presence of a teacher

Supervised learning is used when it is necessary to teach a machine to recognize objects or signals. The general principle of supervised learning is “look, this is a door and this is a door and this is also a door”.

Unsupervised learning uses the principle of “this thing is just like the others”. Algorithms learn similarities and can detect differences and perform anomaly detection by recognizing what is unusual or dissimilar.

Reinforcement learning is used where a machine is tasked with correctly executing tasks in an external environment with many possible courses of action. For example, in computer games, trading operations, and for unmanned vehicles.

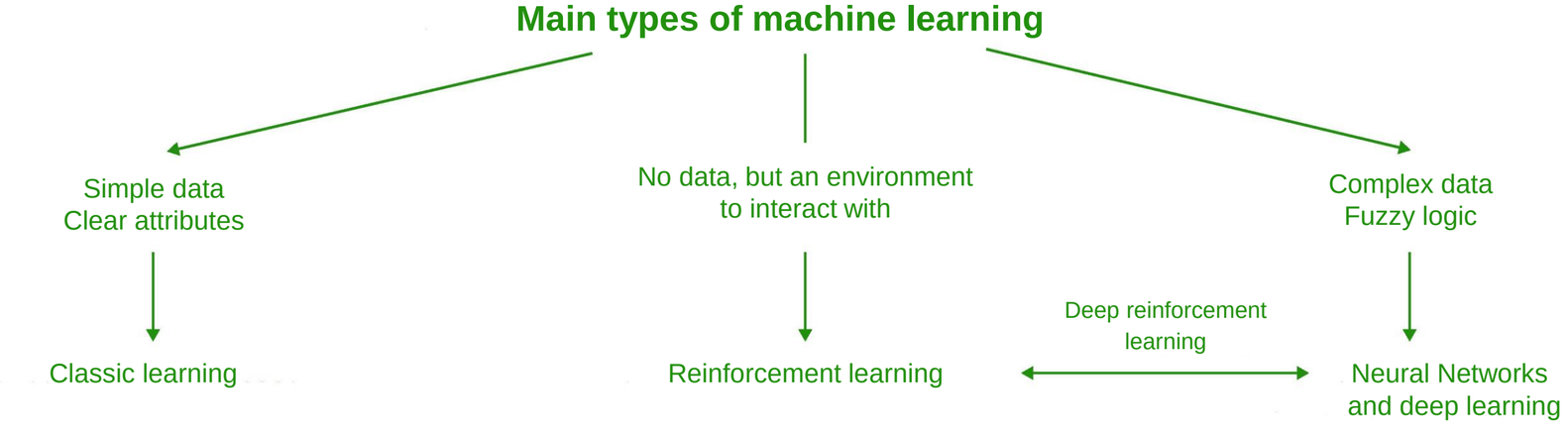
By the type of algorithms used

A) Classical learning

Known and well-researched learning algorithms, mainly developed more than 50 years ago for statistical bureaus. Suited primarily to data processing: classification, clustering, regression, etc. It is used for forecasting, customer segmentation, etc.

B) Neural networks and deep learning

The most modern approach to machine learning.
Neural networks are applied where image and video recognition or generation, complex management or decision making algorithms, machine translation and similar complex problems need to be solved.



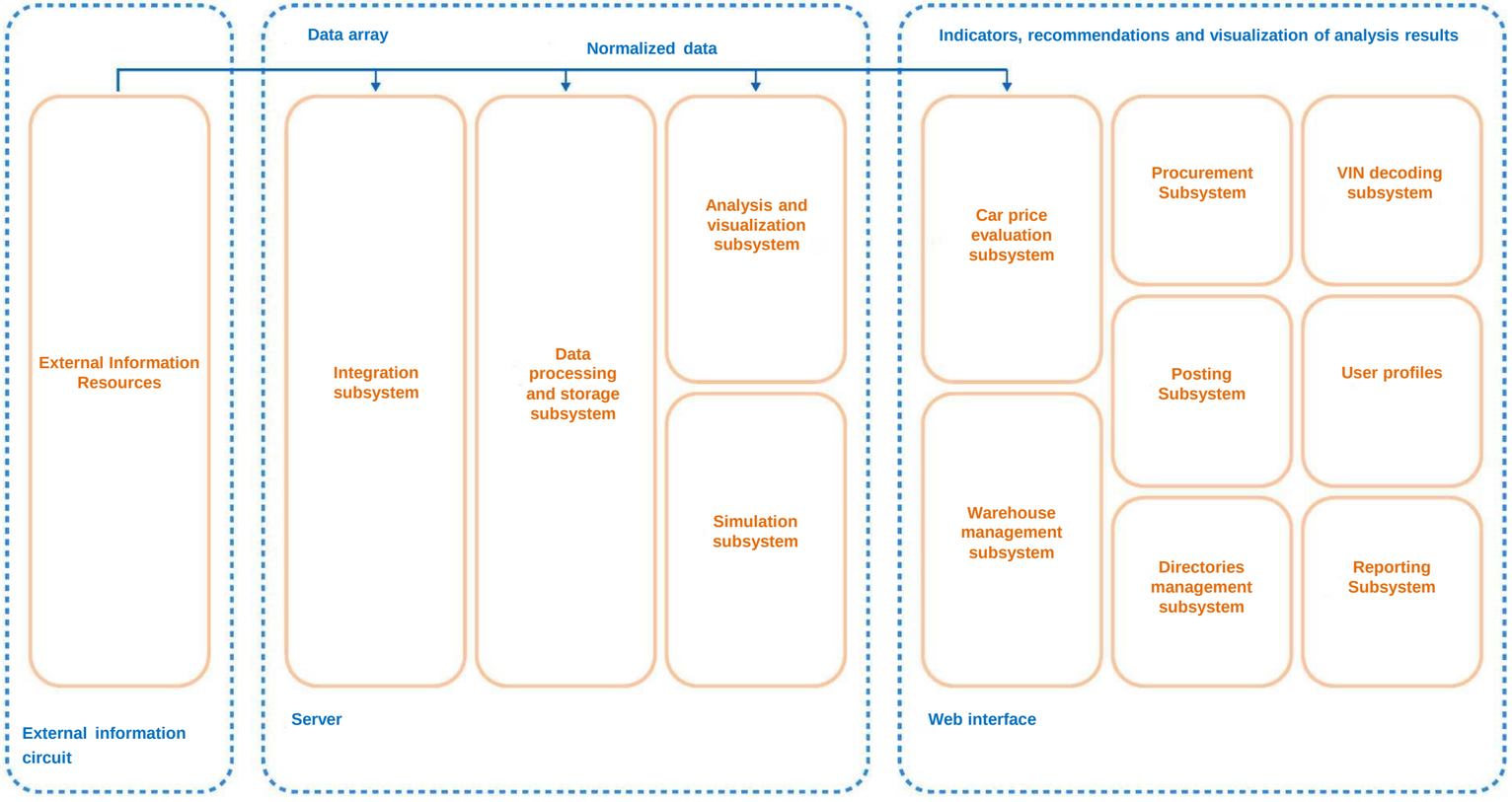
Architecture

front-end

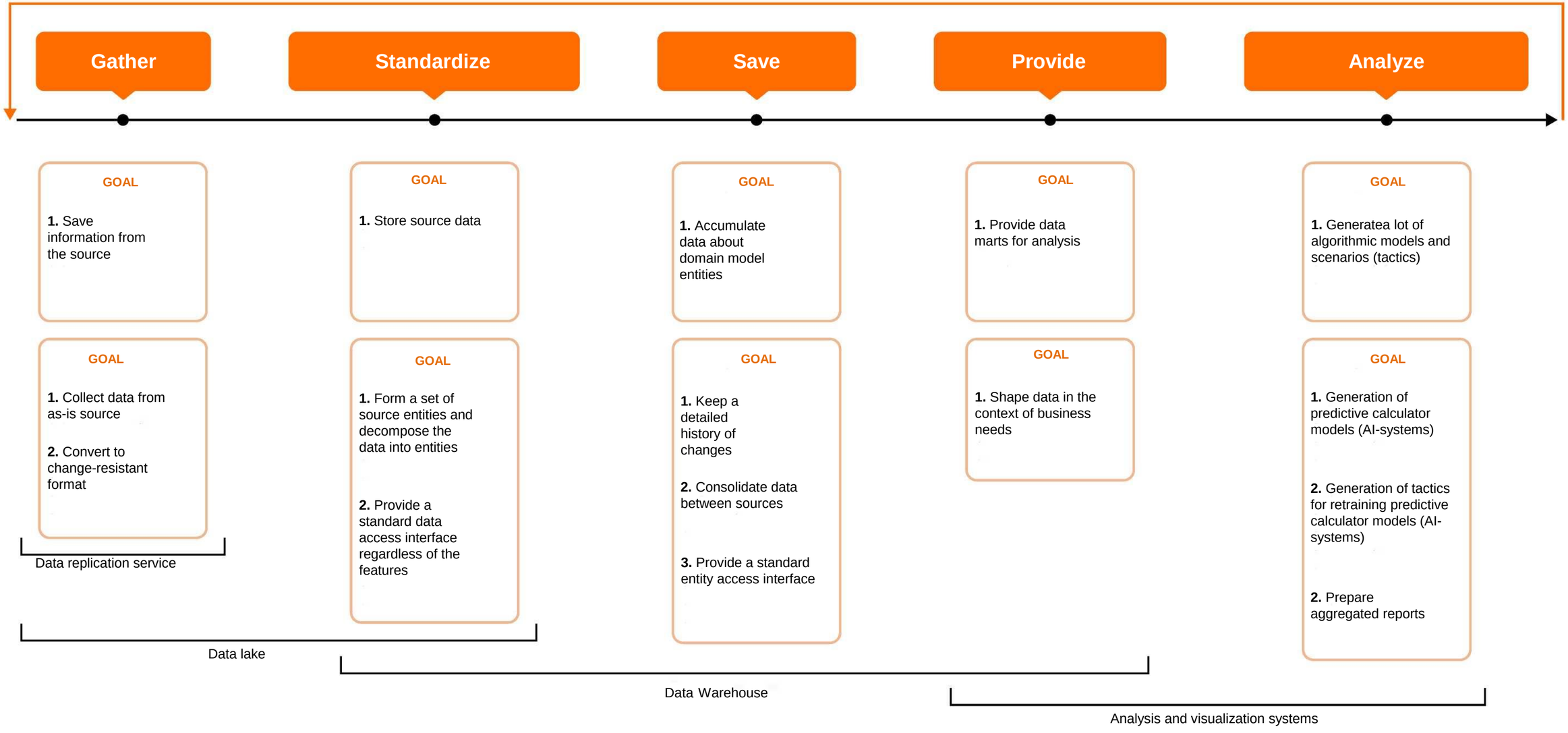
- Markup language: HTML5
- Stylesheet: CSS
- Programming language: JavaScript
- UI frameworks and libraries: jQuery, React, Bootstrap, Node.js, AngularJS, Backbone.js, Modernizr, jQuery UI, Express JS

back-end

- Operating systems: Ubuntu
- Web Server: NGINX
- Programming languages: Python
- Databases: PostgreSQL
- Cloud Infrastructure: Amazon S3



Data layer architecture



Data processing and storage subsystem

- Selecting data source and information to be loaded
- Data loading and updating
- Selecting transformation scheme according to defined rules for incoming data processing
- Data transformation and cleansing
- Incremental loading of data changes
- Generating a fact table, building a multidimensional cube
- Structuring data for subsequent analysis in terms of different criteria and attributes
- Formalizing description of data properties and attributes
- Pre-aggregating the data
- Calculating derived indicators based on loaded data (aggregates, calculated indicators, recalculation according to units)
- Comparison data from different sources (mapping)

Data analysis and visualisation subsystem

A system module of the Calculator that provides comprehensive analysis of large volumes of heterogeneous data, with a consistent increase in the level of analysis of the data in consideration.

- Ad-gluing
- Analysis of similar offers
- Average market price analysis
- Average market mileage
- Price to market ratio
- Correction by mileage
- Rating analysis
- Cost to market ratio analysis
- Margin potential analysis
- Indicative valuation of car selling period
- Scoring evaluation
- Similar offer sales analysis

- Visualization of similar offer analysis results
- Average sale rate
- Ad attention analysis
- Inter-regional analysis
- Analysis of rolled back mileage
- Needed repair analysis
- Car value adjustment analysis
- Analysis of markdowns by mileage and time
- Analysis of market saturation with models
- Stock parameter analysis
- Pricing and procurement specialist performance analysis

Simulation subsystem

A Calculator system module, which is the software implementation of the created mathematical models integrated into the Calculator software.

01 Market dynamics simulation

02 Car repurchase value simulation

03 Sales economics simulation

04 Repurchase and sales strategy simulation

05 Inter-regional sales simulation

06 Inventory forecasting and optimization simulation

07 Required repairs and maximisation of margins from repairs simulation

08 Analysis of required repairs based on car photos

09 Applying AI to make calls

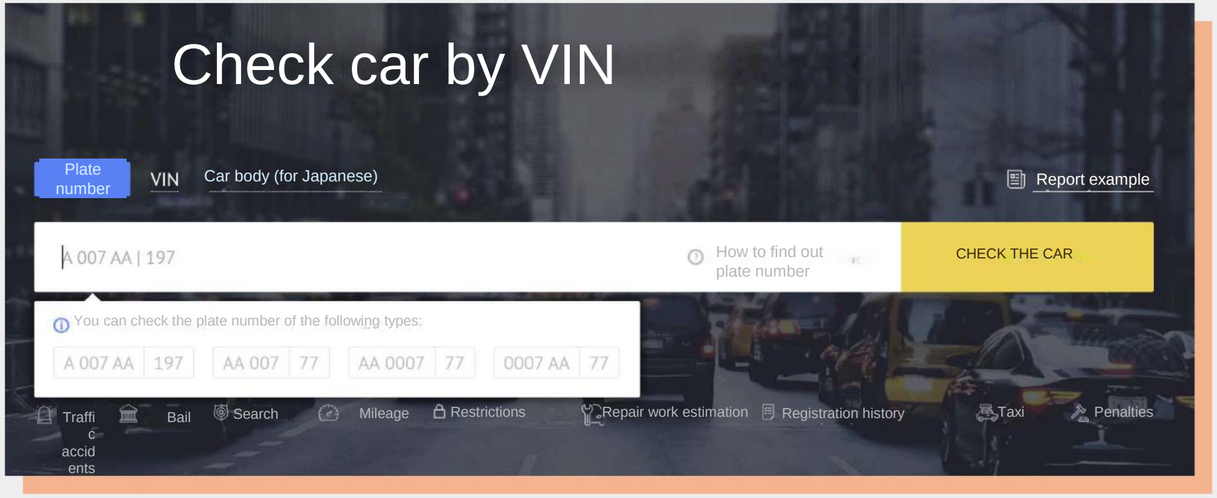
10 Applying AI to analyze calls

11 Recommendation System

VIN number decoding subsystem

A user module that enables the following car parameters to be decoded from the VIN number:

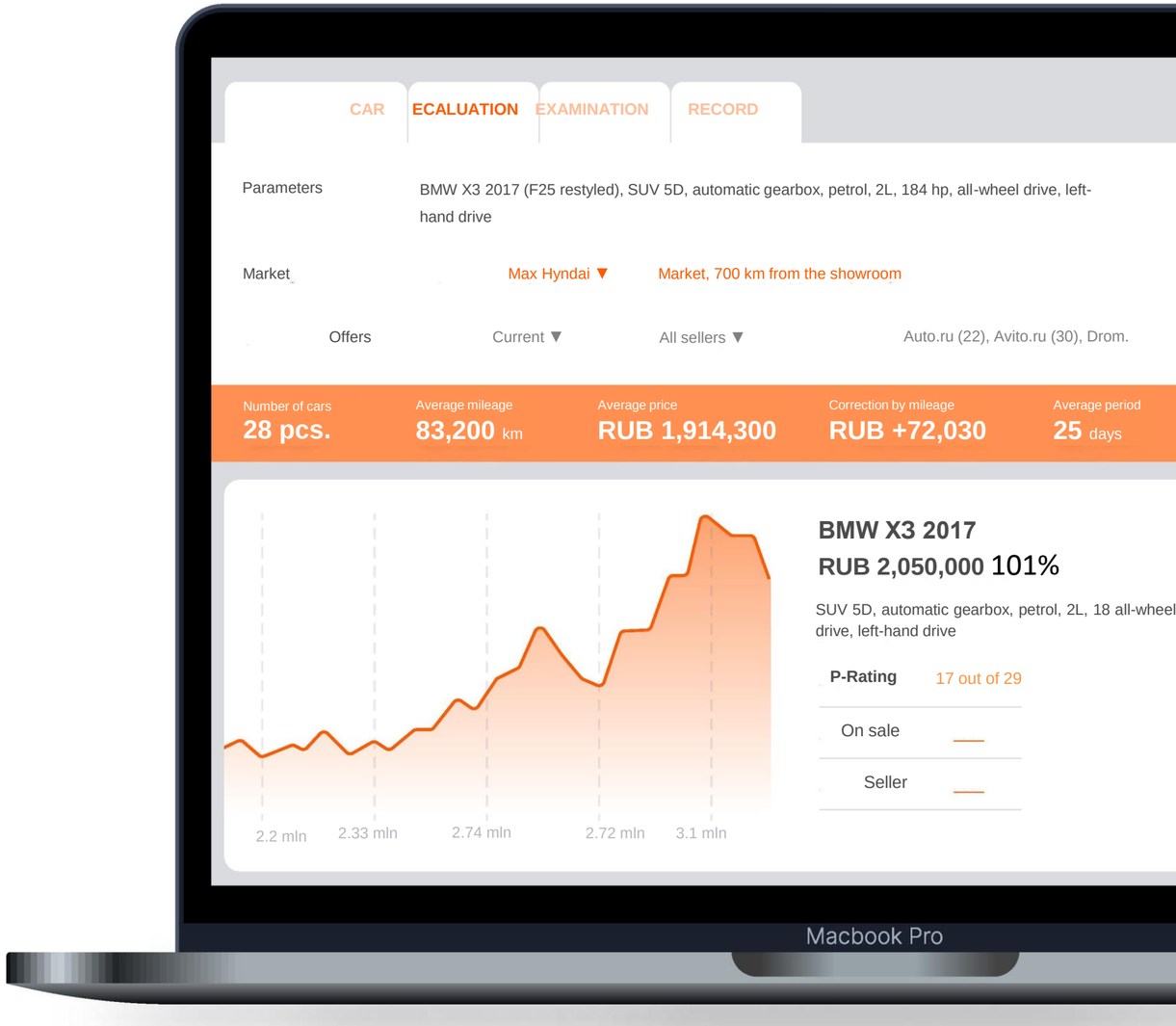
- Configuration
- Car options
- Registration details
- Information on publications
- Accident and repair information
- Mileage information
- Insurance information
- Information on technical inspections



Car price evaluation subsystem

01

A user module designed to perform a car repurchase value assessment, providing input of car data, settings of analysis and simulating parameters and their results in the interactive forms of the Subsystem's interface.



Car price evaluation subsystem

Visual interface forms **displaying** analysis and simulation results

- Evaluation register with filters and sorts
- Evaluation card
- Evaluation results following the results of analysis and simulation
- Recommendation system results
- Status change notifications
- VIN decoding
- Review of reevaluations
- Comments to evaluation
- Attaching files to evaluation
- Preview of documents and photos
- Preliminary and full evaluations
- Register of similar offers by car characteristics with detailed parameters
- Form for entering and displaying diagnostic results
- Forms for visualizing the analysis of similar offers
- Form for launching and viewing the results of the car due diligence

Visual interface forms allowing for the **setting and editing** of parameters and input data for analysis and simulation

- Setting up evaluation parameters (preparation time, cost of preparation, planned turnover rate, margin)
- Setting up and displaying the margin grid
- Setting up parameters to be used when selecting similar offers
- Setting up the radius for the selection of similar offers
- Setting up the time interval for the offers to be selected
- Setting up the list of classifieds for similar offers selection
- Manual exclusion of selected offers
- Setting up the list of car value analysis factors
- Setting up strategies and tactics

Warehouse management subsystem

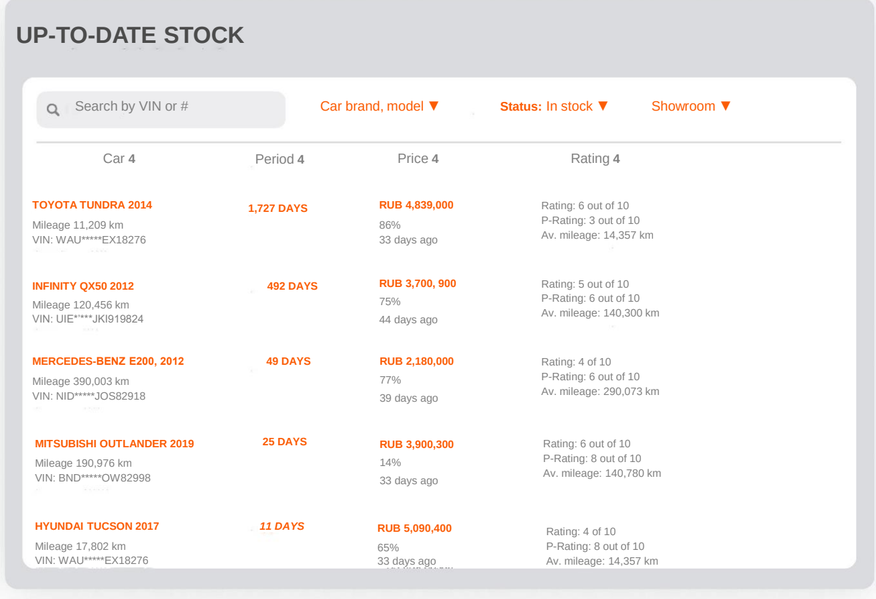
A user module designed to automate car pricing and stock management processes.

Visual forms of the subsystem interface

- Register of cars in warehouse with statuses
- Car card
- Add car to warehouse
- Comparison of cars in warehouse
- Car price history
- Display of car market analysis and recommendations
- Car maintenance scheduling
- Stock monitoring: visualization of stock analysis, indicators and alerts (leading to sale periods, days in warehouse, prices)
- Marketing tools for stock management: data on views, calls, visits in terms of cars and sale channels
- Display of stock simulation results, shortage and surplus analysis
- Visualization of the cars in stock analysis results: deviations from the strategy, pricing errors, focus on cars, traffic in comparison with competitors

Visual interface forms allowing for the **setting up and editing** of parameters and input data for analysis and simulation

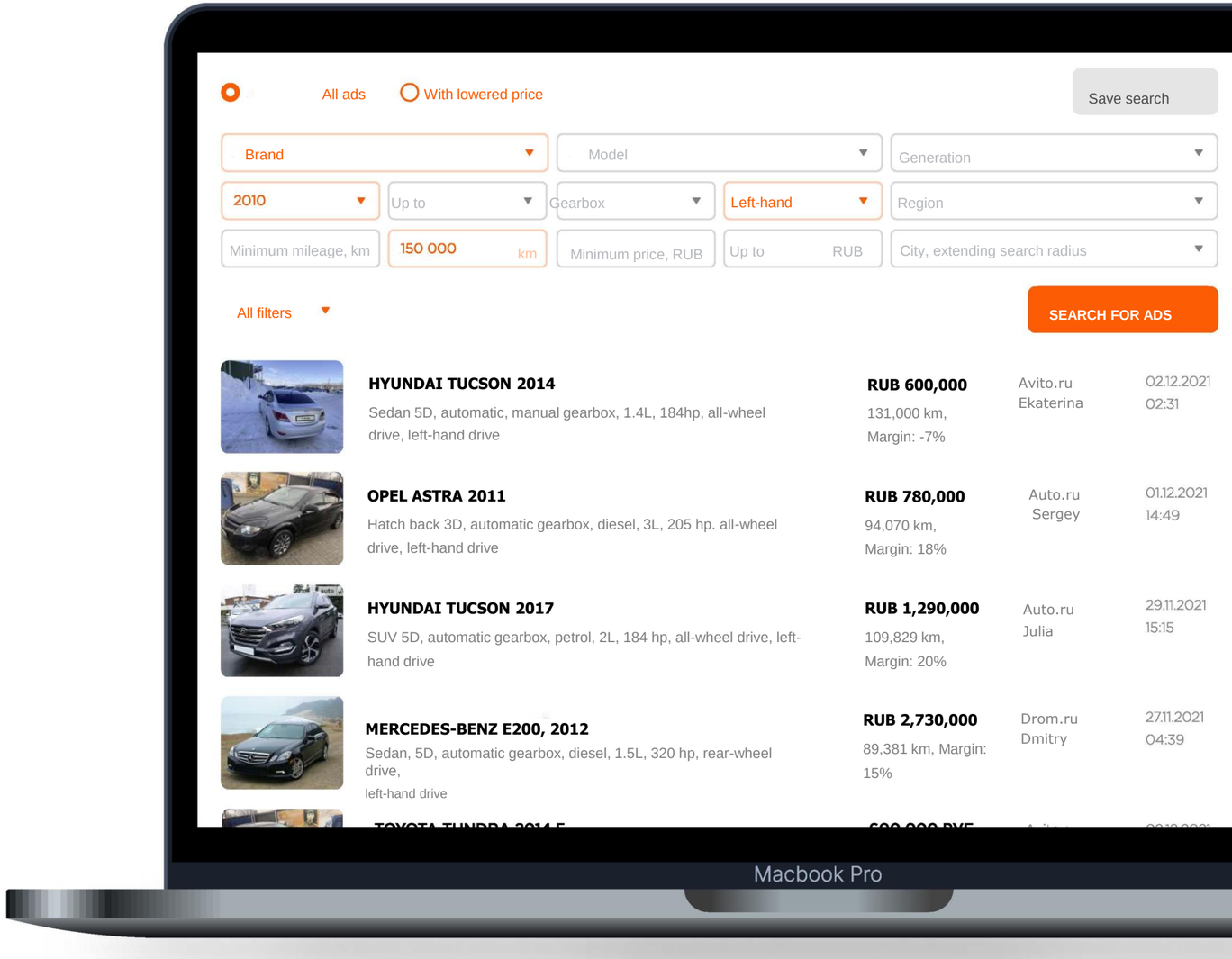
- Setting up dynamic price changes
- Setting up sale strategies: entering strategy parameters and tactics
- Creation of individual strategies



Procurement Subsystem

A user module designed to automate car pricing and stock management processes.

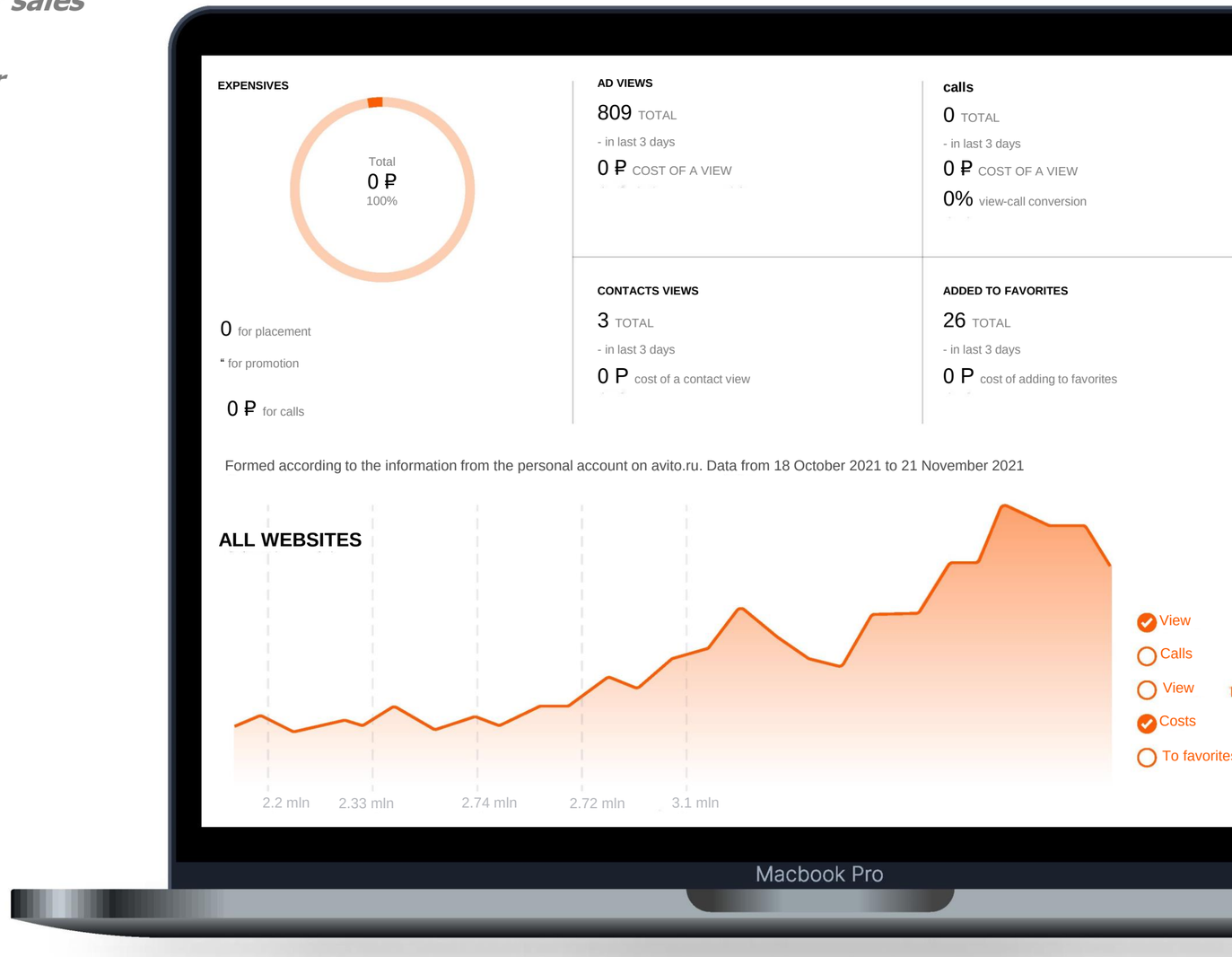
- The subsystem is a user module designed to automate used car purchasing processes based on market analysis data
- Preview of pre-processed, glued offers from classifieds in a single window
- Display a list of offers based on pre-set search filters
- Displaying the analysis results for each individual car sales offer and recommendations for decision-making
- Assignment of a procurement specialist with fixing of work and interaction status
- Outgoing call-tracking line



Posting subsystem

A user module designed to automate the process of posting car sales offers on classifieds. The subsystem is designed to enable the formation of feeds (unloads) in the format set by classifieds for publishing car sale ads from stock.

- Statuses of readiness for publication
- Generation of feeds
- Organization of uploading ads on classifieds
- Setting up and managing publications



Reporting subsystem

The subsystem provides reporting functionality as a result of data analysis and simulation.

- Client Proof Report
- Evaluation reports
- Stock summary
- Stock summary
- Deviation report
- Report generator

19 days (2 cars)	**up to 520,000 RUB**
11 days (18 cars)	**620,000 RUB**
5 days (7 cars)	**845,000 RUB**

Number of cars	Average price	Sold in 3 months	Av. sale period
19 pcs.	**RUB 760,000**	**48** pcs.	**12** days

Popular price	Repurchase price	Price for commission	Margin
RUB 750,000	**RUB -680,000**	**RUB -730,000**	**80,000**

HYUNDAI TUCSON 2014
Sedan 5D, automatic, manual gearbox, 1.4L, 184hp, all-wheel drive, left-hand drive

RUB 600,000
131,000 km, 2014

PERIOD
On sale: 2 days

02.12.2
02:31

OPEL ASTRA 2011
Hatch back 3D, automatic gearbox, diesel, 3L, 205 hp. all-wheel drive, left-hand drive

RUB 780,000
94,070 km, 2011

PERIOD
On sale: 3 days

01.12.2
14:49

HYUNDAI TUCSON 2017
SUV 5D, automatic gearbox, petrol, 2L, 184 hp, all-wheel drive, left-hand drive

RUB 1,290,000
109,829 km
2017

PERIOD
On sale: 93 days

29.09.
15:15

MERCEDES-BENZ E200, 2012
Седан 5 дв, автомат, дизель, 1,5л, 320 л.с., задний привод

RUB 2,730,000
89 381 км

PERIOD
В продаже:

27.11
04:

NAME OF REGION	CARS CURRENTLY	SOLD IN 3 MONTHS	SALE PERIOD	SELLING PRICE
Moscow and the Moscow Region	21	48	12	RUB 760,818
Krasnodar Territory	13	16	25	RUB 619,000
Stavropol Territory	7	10	14	RUB 654,000
St. Petersburg and the Leningrad region	10	11	18	RUB 832,714
Sverdlovsk region	10	9	13	RUB 694,199

Integration subsystem

A Calculator system module allowing flexible integration with external systems. Connection of external information systems is provided by the Calculator's API connectors.

01 Auto.ru
02 Avito
03 Drom
04 Youla
05 bibika.ru
06 Автоброкер (Avtobroker)
07 Quto.ru
08 Carsguru
09 IRR
10 110km.ru
11 car.ru
12 Geolocation/geopositioning services
13 ERP/CRM partner systems
14 Avinf
15 Автотека (Avtoteka)
15 Автокод (Avtokod)
16 CarsCats
17 Integration with common services of Compulsory Car Insurance services
18 Integration with lending services
19 Integration with Comprehensive Car Insurance services
20 Integration with Voluntary Liability Car Insurance services
21 Services of the State Road Safety Inspectorate
22 Services of the Federal Bailiff Service
23 Services of the Federal Tax Service
24 Services of the Russian Union of Motor Insurers
25 Services of the National Bureau of Credit Histories
26 Services of Ministry of Internal Affairs
27 Services of Federal Customs Service
28 Services of the Federal Notarial Chamber
29 Services of Rosfinmonitoring
30 Services of Rosreestr
31 DataOne
32 Autovista
33 Carfax
34 Autocheck
35 Zulassung

For registered Users, their electronic profiles (personal accounts) must be provided, within which general information about the User shall be recorded.

User profiles

The advanced system access rights contain access to the following functions:

01 Creating, editing and blocking User credentials

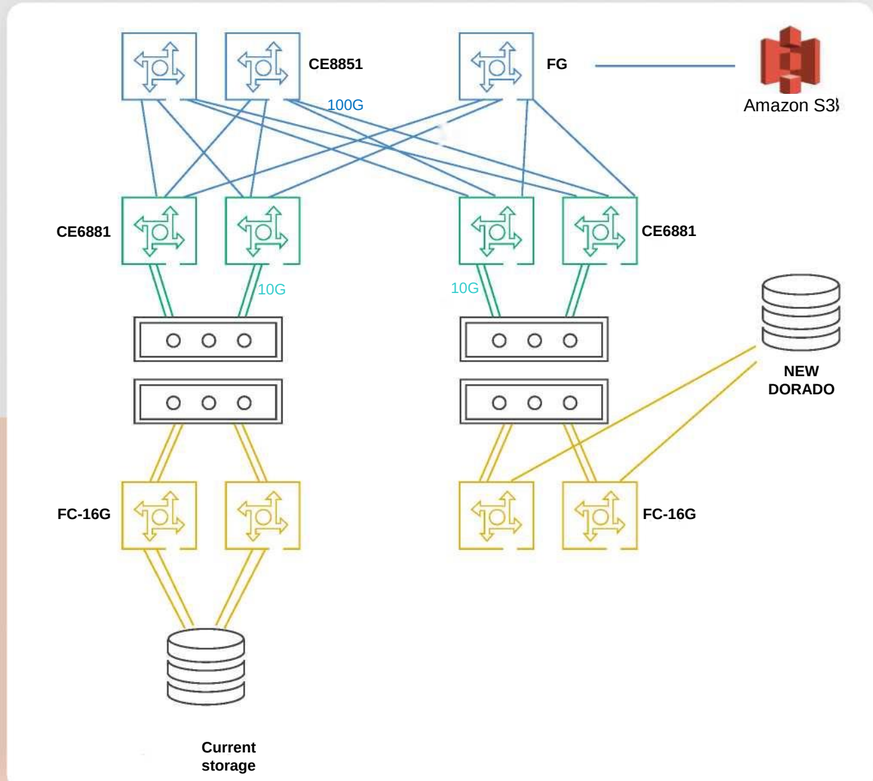
02 Viewing login data

03 Processing messages of System Users

04 Management of System directories

IT infrastructure

- VMware failover cluster (3 node Supermicro servers , N+1 scheme , each node - Xeon 6248R, SAS SSD, 1tb RAM) hosts
- Huawei Dorado 6000 V6 storage systems + expansion shelves for each, a total of 96 NVME 7.68 TB disks (738 GB of raw data, in deduplication mode up to 1.5 Pb of data)
- Backup storage in Huawei Dorado 3000 V6 storage system + expansion shelf, total 118 NL-SAS 10 TB disks (1.2 PB raw data, in deduplication mode up to 2 PB data)
- Switching with the network core is carried out via an Ethernet switch Huawei CE8851-32CQ8DQ-P
- Cloud Infrastructure - Amazon S3/SaaS - cloud VMs and services with 99.995% annual SLA , data security and compliance with PCI-DSS, HIPAA/HITECH, FedRAMP , SEC Rule 17-a-4, EU Data Protection Directive, FISMA



Project-wide effects

The expected effects of implementing all functions of the Calculator and implementing all machine learning models. The MVP implementation effect is determined by achieving 60% accuracy of one of the machine learning models created.

- Achievable accuracy of the car repurchase value evaluation model – at least **95%**
- Achievable accuracy of sales price model – at least **95%**
- Achievable accuracy of a inter-regional car value analysis model – at least **95%**
- Achievable accuracy of market dynamics analysis and forecast model – at least **95%**
- Achievable accuracy of stock prediction and optimization model – at least **95%**
- Achievable accuracy of the model to identify repairs and maximize repair margins – at least **95%**
- Reduction in direct costs due to a reduction in the pricing department's payroll and no increase in diagnostic staff **(RUB -7.9 mln** per sales point per year)
- Increase in margins due to analysis of the repurchase-sale price ratio in car evaluation – at least **2%**

- Increase in conversion into visits by providing a preliminary repurchase price, as well as a proof report justifying the repurchase price
- Increase in customer base and frequency of use of the OmniCarmart mobile app by providing a free, user-friendly car evaluation tool;
- Increase in conversion into submitting after diagnosis by providing an accurate and validated car evaluation;
- Increase margins by eliminating the human factor and its impact on car evaluation at repurchase and pricing at sale, including the corruption component;
- Stock optimization by using a price adjustment recommendation system;
- Providing a unique customer experience by providing transaction clarity assurance tools.

High risks

Lack of adequate quantity and quality of data
Every week

Shortage of qualified Data-Science and IT professionals
Every week

Classifieds prohibit parsing of data
Every month

Low accuracy of the machine learning models created
Every day

Changing the positioning of the product in the market
Every year

Integration risks of connecting data sources
Every year

Reducing in purchasing power of customers
Every quarter

Emergence of a peer competitor in the domestic market
Every month

Medium and low risks

Staff resistance to the introduction of new business processes for evaluating and managing the warehouse
As part of implementation

Fundamental changes to the Terms of Reference during implementation
As part of design

Changes in Laws and Statutory Instruments (LSI) governing the industry
Every month

Setting priorities in work

Desirable. Low and medium labor costs

- Warehouse management subsystem
- Generation of analytics and reporting
- Formation of graphs
- User management
- Procurement Subsystem
- Posting subsystem

Mandatory. Low and medium labor costs - MVP

- Data collection
- Data normalization
- Mathematical simulation of the repurchase price
- Mathematical simulation of sale price
- Interface to enter valuation data, run simulations and view results to verify model adequacy: minimum functionality of the Car price evaluation subsystem

Desirable. High labor costs

- AI application for call-tracking system
- Analysis of required repairs based on car photos
- Recommendation system for inter-regional sales
- Recommendation system for optimum repair and its cost

Mandatory. High labor costs

- Building and training an inter-regional value analysis model
- Building and training a market dynamics analysis and forecasting model
- Building and training a model for forecasting and optimizing stock
- Building and training a model for identifying repairs and maximizing margins from repairs
- Evaluation and warehouse management subsystem
- Sale strategy management
- Price adjustment recommendation system
- Stock management recommendation system

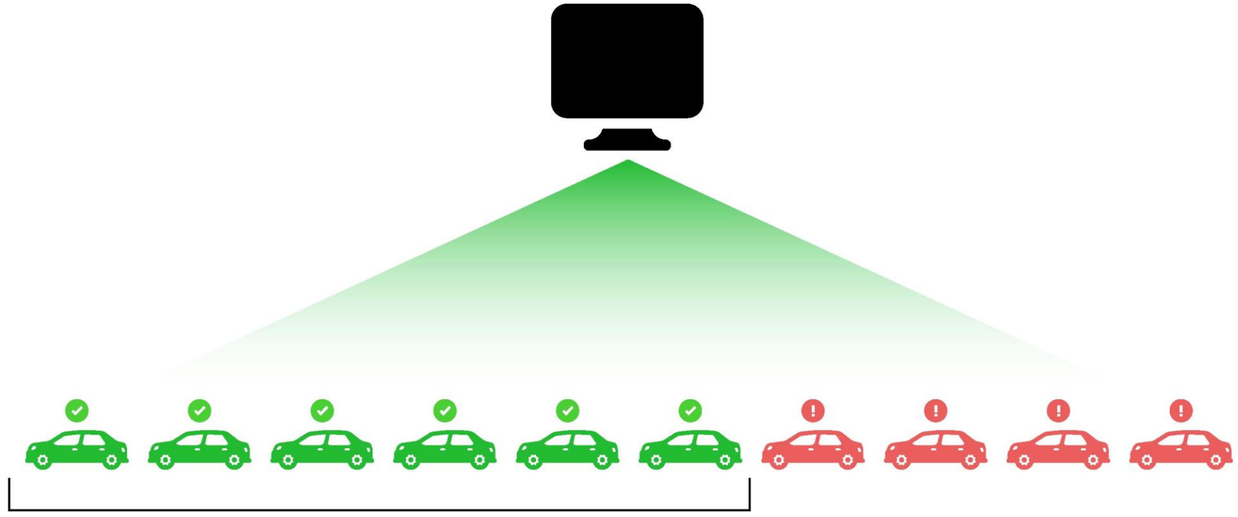
MVP evaluation criteria

Fulfilment of one of the three criteria

Achievable accuracy of the car's repurchase value model – at least 60%

Achievable accuracy of sales price model – at least 60%

Achievable accuracy of market analysis and forecasting model – at least 60%



Evaluation accuracy: 60%

“Making an MVP does not equal launching it”

For example, when Sberbank launched self-service terminals, they would not have brought any value without the consultants who first taught customers how to use them (they even now help, but less so). That is, MVP was not just a terminal, but a terminal + consultant.

Determining the simulation accuracy

The accuracy of the model is determined by comparing it with available experimental data on the real object or with the results of other, previously made and well-established models. The accuracy of the integrated simulation of the car repurchase value, selling price, and the market dynamics is determined by achieving the specified parameters within the following framework:

- Strategies
- Tactics
- Local objective (plan)

Model accuracy 95% = in 95 cases out of 100 achieving the set parameters both within the repurchase and the selling with the given strategy and tactics.

The methodology for evaluating simulation accuracy is based on the following approaches:

1. **Estimation of sales parameters**
   - Falling within the forecast sale date;
   - Falling within the forecast sale price.
2. **Repurchase funnel evaluation**

   Automated evaluation)/B(manual valuation) testing: The target transition value from evaluation to acceptance in group A must be:
   - Not lower than the value for group B;
   - Not lower than the average value for all cars accepted for all Carmart cars in manual evaluation mode for an average of 3 months prior to the experiment
3. **Evaluation of unrepurchased cars**
   - Falling within the competitor's specified car sale period
   - Falling within the competitor's specified indicative margin

Example:
A customer has come to submit their car Skoda Rapid 2021, category A
Calculator data:

- Mode: Recommended system for the user
- Strategy: margin maximization.
- Turnover rate: 30 days;
- The planned margin of the strategy: 7.6%;
- Recommended repurchase value: RUB 1.515 mln
- Recommended repair value: 20,000 RUB (replacement and painting of 1 element) in order to maximize margin;
- Recommended value of sale after repair: RUB 1.7 mln
- Final selling price: RUB 1.7 mln
- Final margin: 12.2%.

The AI algorithm developed will be considered successful and the accuracy of the model will be 95% if the actual performance matches the estimated performance in 95 cases out of 100

carmart

Car price calculator