DAVinCI LABS

AI SOLUTION TO CREATE REAL VALUE FOR ENTERPRISES

Until now Machine Learning technology has been occupied by only a few experts.
DAVinCI LABS automate and simplify machine learning technology, and enable data analysis with just a few clicks

FEATURES

"DAVinCI LABS" - AI based data analytics system

Get proper pre-processing done automatically

Well-prepared data is the most important recipe for powerful predictive analysis. DAVinCI LABS automatically performs processing tasks that are essential for Machine Learning, such as missing value handling, variable type selection, and various data transformation.

Follow the UI that thinks like a data analyst

Modeling, validating, comparing, reporting.. There are a ton of tasks that a data analyst needs to consider. Just follow DAVinCI LABS's authentic UX and its visualized platform that has been designed from years of research in data analysts' modeling process chain.

Strengthen your predictive analysis with rich ML algorithm package

With a few mouse clicks, create powerful prediction models with proven ML algorithms, no hard-coding necessary.

Get optimal business rules through automatic clustering

Create a variety of business rules by discovering many complex patterns hidden within Big Data- All in just one day.

AI is all about auto-optimization

Maximize model performance with AI based Algorithm auto-tuning, Ensemble, and Champion algorithm selection.

DAVinCI understands enterprises' needs

Even a high-performing model is difficult to operate at enterprises, if modeling results are inexplainable or the model itself cannot be updated with ease.With its original technology, DAVinCI LABS overcomes such obstacles by providing explanation for its predictions, and by automatically extracting JAVA library files for fast and convenient model updates.

PREDICT THE FUTURE, GAIN BETTER INSIGHTS

Advanced analysis was the job of a limited department or external company.

However, analysis departments and external companies are far from the local site, so they may not be able to accurately share details of the local operation. DAVinCI LABS allows each department to use their business knowledge to carry out projects.

It can relieve you from relying on professional data scientists and relying on external companies for data analysis. By enabling person in charge of business department to use machine learning technology, it provides the models required by the workplace faster and closer.

DAVinCI LABS is an Automated Machine Learning Solution in which all the know-hows of data science are applied and automated. The solution produces AI models and AI clusters as end results.

1. Data upload
Extract structured data file from existing data and external data sources

2. Data preprocessing
Automatically convert to data applicable to machine learning
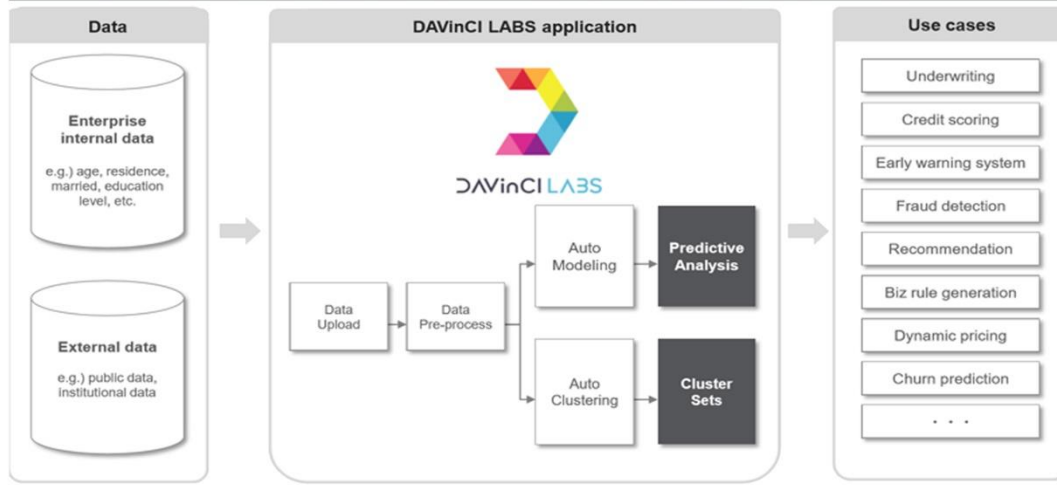
3. Algorithm learning and analysis modeling
No coding is required, and algorithm parameters can be adjusted with just a click to generate a variety of models.

4. Prediction model and reporting
Prediction function can be automatically extracted in JAVA library format. It can be linked to real-time operation system immediately.

By training machine learning models with clients' data, we provide highly accurate prediction functions.

Data
- Enterprise internal data
  e.g.) age, residence, married, education level, etc.
- External data
  e.g.) public data, institutional data

DAVinCI LABS application

DAVinCI LABS

Data Upload → Data Pre-process → Auto Modeling → **Predictive Analysis**

Auto Clustering → **Cluster Sets**

Use cases
- Underwriting
- Credit scoring
- Early warning system
- Fraud detection
- Recommendation
- Biz rule generation
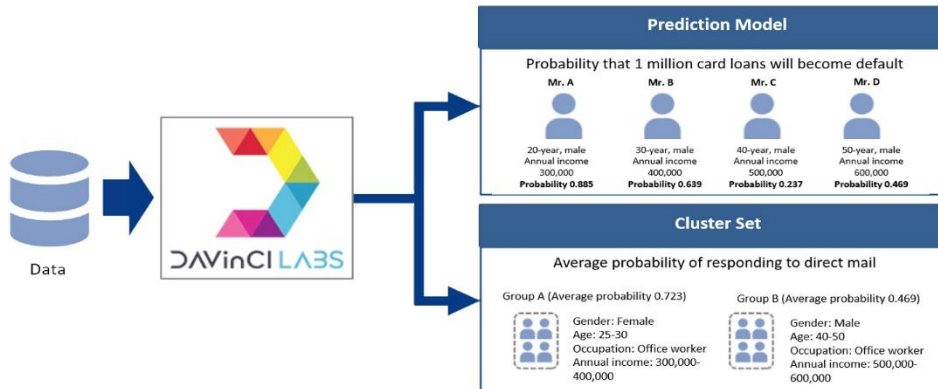- Dynamic pricing
- Churn prediction
- . . .

SIMPLICITY

Simplicity if you have "Business Knowledge"
In general, data analysis work using machine learning requires an understanding of three fields:
"Programming", "Statistics" and "Business knowledge".

However, it is very difficult to understand all these 3 fields. DAVinCI LABS is designed to automate the fields of programming and statistical modeling so that data analysis can be started by only having business knowledge.

PREDICTION MODEL OF DAVINCI LABS

Prediction Model

Probability that 1 million card loans will become default

Mr. A	Mr. B	Mr. C	Mr. D
20-year, male Annual income 300,000 **Probability 0.885**	30-year, male Annual income 400,000 **Probability 0.639**	40-year, male Annual income 500,000 **Probability 0.237**	50-year, male Annual income 600,000 **Probability 0.469**

Cluster Set

Average probability of responding to direct mail

Group A (Average probability 0.723)
- Gender: Female
- Age: 25-30
- Occupation: Office worker
- Annual income: 300,000-400,000

Group B (Average probability 0.469)
- Gender: Male
- Age: 40-50
- Occupation: Office worker
- Annual income: 500,000-600,000

Data trends are automatically quantified and grouped, and prediction models are automatically created.

1. Prediction model: Predict the probability of an individual's future behavior under certain conditions

2. Cluster set: Automatically extract groups with extreme characteristics for the target

SAMPLE OF BANKING INDUSTRY

We have many achievements in overseas companies such as bank, and we are also starting to introduce to domestic companies. By implementing DAVinCI LABS, for example, we increase in speed and improve the efficiency of all phases in bank loan business, so we can actualize profit improvement. We have achievements in each department like customer attraction, initial screening, mid-market screening, and debt collection.

*If you need prediction modeling based on pattern analysis such as risk assessment, fraud detection, target marketing based on customer behavior / character analysis, customer churn prediction, failure prediction, complaint prediction, and operational efficiency, you can use DAVinCI LABS regardless of area or field.

Customer attraction
- Improve customer acquisition (Forecast prospect in advance)
- Cost reduction (Improved targeting ability for efficient marketing)

Initial screening
- Enhancement of screening ability (Find good customers who could not be found by the conventional screening model and control the occurrence of bad loans

Mid-market screening
- Decrease in delinquency rate (Early alerts can be issued based on customer transaction status, etc.)

Debt collection
- Selecting the optimal contact channel (Improve the contact rate with customers)
- Predict the collectable bad loan