

VT RISK

DATA DRIVEN SOLUTIONS

**ADVANCED ANALYTICS
HIRE SENIOR CONSULTANTS
+20 EXPERIENCE IN DATA PROJECTS**

AI / ML ALGORITHMS

**UP TO 20% +EFFICIENCY
UP TO 30% COST REDUCTION
AI FORECASTING TOOLS**

RISK MANAGEMENT

**SMALL BUSINESS
UNSECURED
MORTGAGE
CREDIT CARDS**

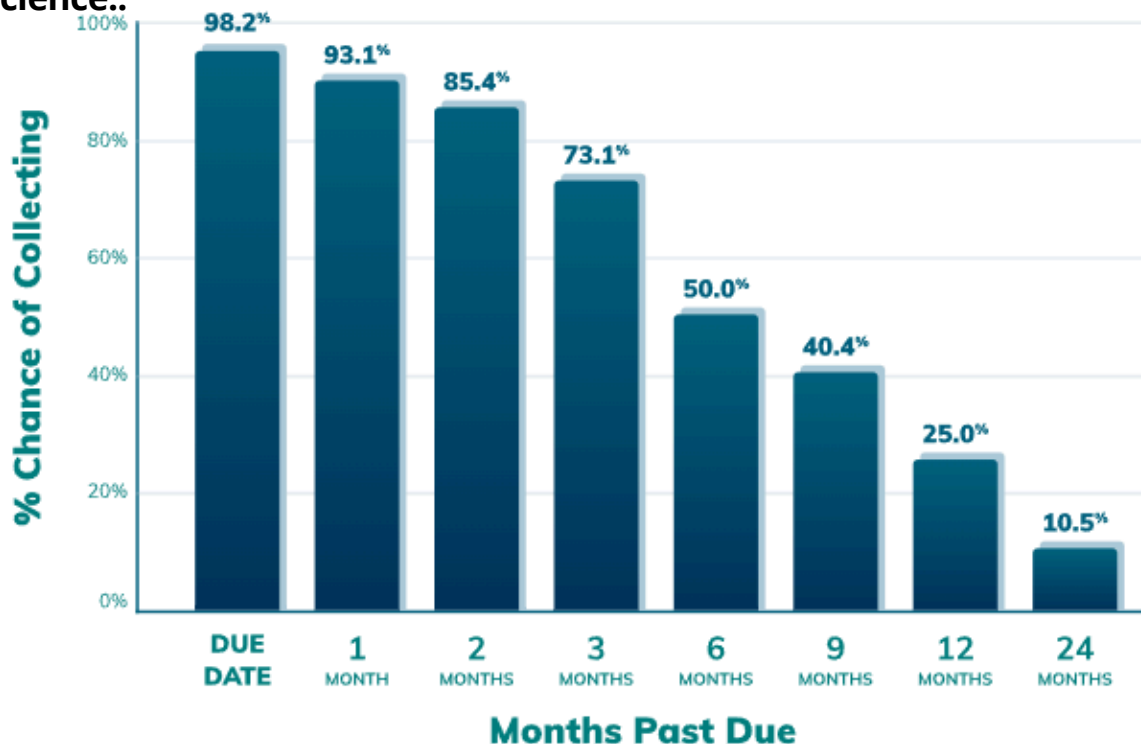
DATA DRIVEN DECISIONS

The fundamentals of predictive analytics became part of core business model: understanding the data, data preparation, balanced and unbalanced data sets, constructing training-validation-holdout sets, cross-validation, predictions and target leakage. Technical solutions used by fintech platforms as a base for business model.

Our team: Starting with projects in telecom industry 1998-2004, as a data driven born business model, now our team offers support to banking industry, pioneering the wave of technological advancements.

The collection department sometimes remains a bastion for critical process that needs ever-evolving. The ability to collect efficiently is not just about persistence, it is also about good customer intelligence. With the adoption of analytics in the collection process, the bank can effectively transform the collection department **from a cost center to a value driver**.

The axiom "time is money" resonates with undeniable truth also for data science..



DATA SCIENCE CONSULTING

Data projects with high impact in cost of risk 10-20%, efficiency +10%

1. **FORECASTING:** Data Driven Strategic Business Decisions

We are assisting companies to built powerful tools to gain insights into customer behavior, market trends, and operational efficiencies. By harnessing the power of data analytics and evaluation, companies can make more informed decisions that lead to better outcome

- Conducting market research and analysis
- Developing predictive models
- Identifying high-impact areas of focus for a business

2. **BEHAVIORAL SCORECARDS:** Risk and Debt collection data driven decision

Our team by analyzing risk data, propose adequate risk models, consultants can help businesses identify potential risks and develop strategies for mitigating them:

- Create dashboards and predictive models
- Scorecards models using AI/ML

3. **DATA FOR MANAGEMENT DECISIONS:** Data Visualization and Dashboards

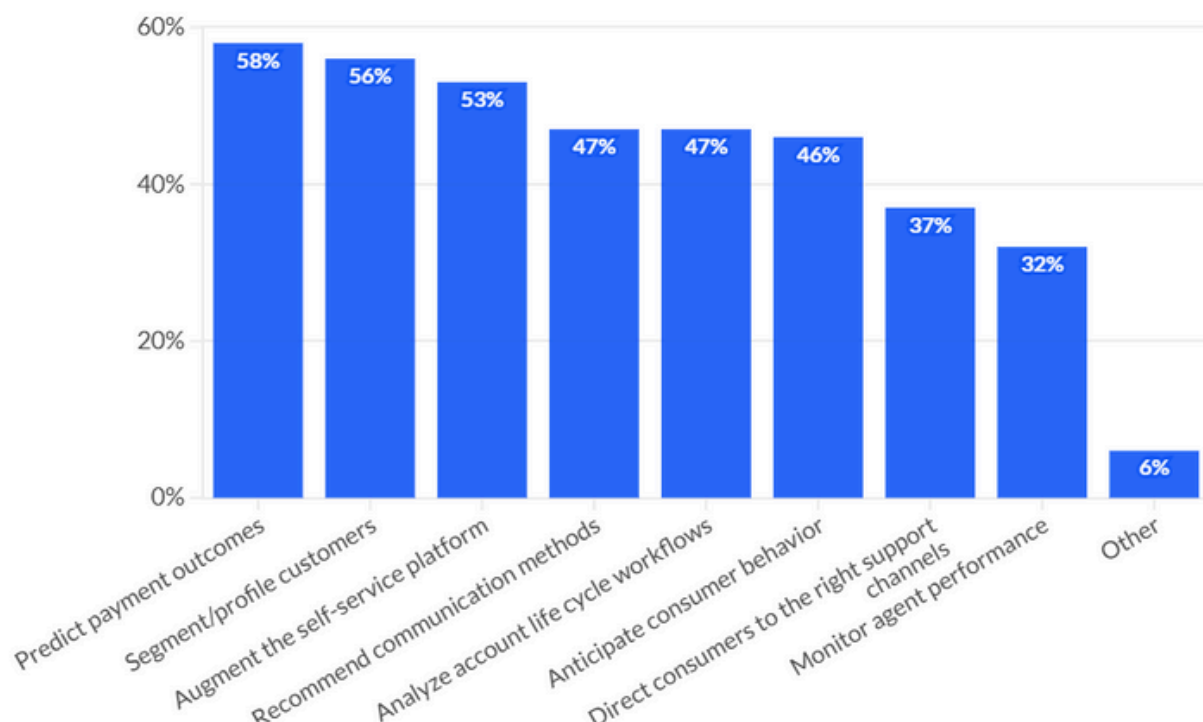
VT RISK team help businesses understand their data better by developing custom data dashboards that provide meaningful visuals of critical metrics

- Develop interactive dashboards
- Training employees on how to use the dashboard effectively

AI/ML in debt collections

Estimated cost 100-200\$ /h

Ninety debt collection firms were asked how they currently, or plan to, use AI/ML-based technology.



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DATA DRIVEN INNOVATIONS FOR DIFFERENT TYPES OF LOANS

AI and ML models are tailored to different loan products, each with its own needs:

1. Small Business Loans

- Innovations: AI models analyze business data, such as behavior, cash flow and market trends, to predict how likely a small business is to repay its loan.
- Benefits: This helps lenders offer customized repayment plans and improve the chances of recovery.

2. Unsecured Loans

- Innovations: AI models can spot small changes in behavior that suggest a borrower is struggling, allowing for early outreach.
- Benefits: This lets lenders target the right people at the right time with personalized repayment plans, leading to better recovery.

3. Mortgage Loans

- Innovations: AI can bring together data about the housing market, the borrower's financial situation, and economic trends to create a more complete picture of repayment risk.
- Benefits: This allows lenders to predict foreclosure risks more accurately and take action to avoid them, like offering restructuring or refinancing options before a default happens.

It often takes years of work, not to mention several failed experiments, before innovation happens, some experts said. In the current technological paradigm controlling data and acquiring the tested knowhow allows companies to “make a ton of progress without necessarily investing a lot of money”.

VT Risk technology like AI and ML to improve efficiency, engage borrowers better, and recover more money.

(1) Decision trees as a modelling technique

(2) Random forest as an ensemble-style modelling technique

(3) Log loss as a metric for evaluating and comparing models



NEXT TRENDS IN DEBT COLLECTIONS

Beyond the necessity accelerate your Cash Flow before economic uncertainties take their toll, the debt collection world is also changing because of some key trends:

- **Using Third-Party Data:** AI models now pull in extra data, like credit reports, social media, and utility bills, to make their predictions more accurate.
- **Behavioral Biometrics:** AI looks at how people interact (from apps like CRM behavioral data to interactions with their devices such as typing speed or voice patterns to identify fraud), to determine borrower authenticity, and predict whether they'll repay, or risk of repayment for next months.
- **Augmented Intelligence:** With AI analyzing data, collections teams can focus their efforts on the accounts that are most likely to bring in results. Up to AI works alongside human agents to help them make better decisions.

How These Innovations Impact Collections

AI and ML innovations offer a lot of benefits for collections teams:

- Revenue: **Higher Recovery Rates:** AI models make better predictions, helping lenders act sooner and recover more money.
- Retention: **Better Borrower Engagement:** Personalized communication whether through chatbots or tailored repayment plans which helps borrowers feel more supported and more likely to respond positively to collection efforts.
- Opex: **Lower Costs:** Automation and smart data analysis reduce the need for manual work, which cuts costs and increases overall profits.



DATA DRIVEN PROCESSES

Some of the fascinating real-world use cases that are leading the next frontier in collection management are:

- **Predictive Analytics:** Utilizing AI to forecast payment delinquency before they occur. This allows for pre-emptive action, such as, contacting customer to arrange alternative payment methods, automate client notifications.
- **Roll Rate Modelling:** Implementing machine learning to project the flow of delinquent accounts across different stages of delinquency (e.g., from 30 to 60 days past due). This helps in understanding the progression of risk and strategizing interventions
- **Segmentation for Tailored Collection:** Segmenting customers not just by risk, but also by their preferred communication channels and payment methods. This results in a more customer-centric collection approach, increasing the chances of repayment
- **Collection Channel Optimization:** Using analytics to determine the most effective collection channels (calls, emails, text messages, etc.) and the optimal frequency of communication to enhance customer response rates
- **Resource Optimization:** Aligning collection efforts with agent expertise and availability, thereby maximizing operational efficiency and effectiveness
- **Recovery Scoring:** Developing models that score accounts based on the probability of recovery, helping prioritize efforts on accounts with a higher likelihood of payment
- **Settlement Analytics:** Using data to build settlement offers based on customer profiles and past payment behavior, ensuring that offers are competitive but also within the recovery expectations of the bank or NBFC
- **Agent Performance Analytics:** Monitoring and analyzing agent performance to identify best practices and areas for improvement



CUSTOM TRAINING DATA SCIENTIST

We are not just implement new technology for the sake of innovation, but our team is focused to offer solutions to change the company culture and increase operational efficiency by using training methodologies to enforce data driven culture and **transfer tested know how** for modern business collaboration tools and techniques.

Data Scientist Training for the data-driven decision processes

Our course is focused integrating new technologies—big data, cloud computing, artificial intelligence, machine learning, to drive supplementary profit in every area of the business.

Digital Transformation

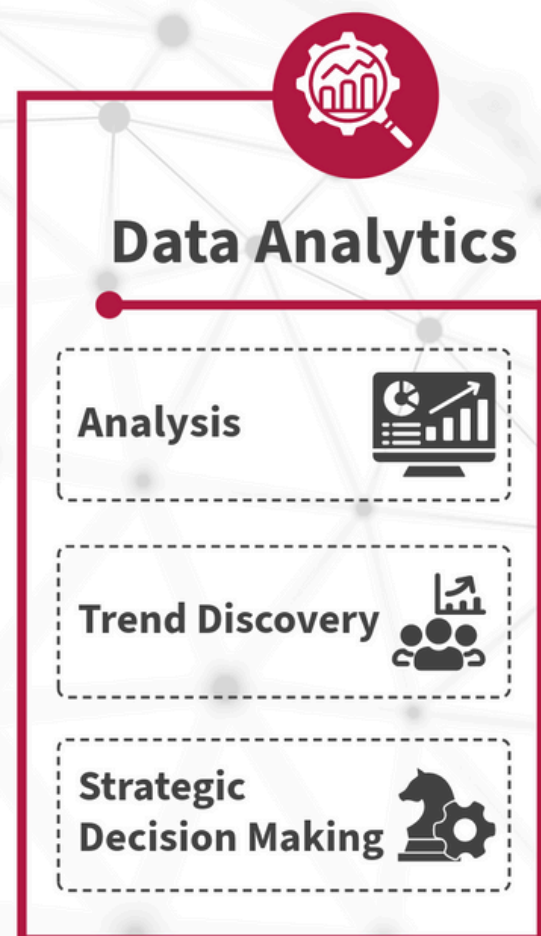
Our Digital Transformation course provides an overview of digital transformation that benefits everyone in your organization

Visual Data Analysis

2nd course part focuses on topics useful to any team, including Distribution Analysis, Correlation Analysis, Multivariate Analysis, and Time Series Analysis.

Data Wrangling for ML

3rd part focuses on Machine Learning . This part include producing the best quality data for use in crafting valuable machine learning models: data profiling, wrangling string data, and engineering date-time features.



VT JOINT VENTURE

IREAL SOFT SRL & VALUABLE TECH SRL



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With 20 years expertise Vlad Bratasanu built from scratch business models in debt collection, risk management, anti-fraud, data-driven decision systems, implemented behavior economics projects, for multinationals and investment funds owned companies. He is the founder of Valuable Technology Joint Venture.

Dragoş Ciobănescu is a graduate of the ASE Bucharest, Faculty of Cybernetics, Statistics and Economic Informatics, Cybernetics specialization. In the years 1998-2002 he participated as a business analyst in the Scoring model development projects of Mobifon (TIW) - now Vodafone. In 2003 he founded iReal Soft and since then has successfully implemented scoring models (logistic regression) and decision automation software at leading companies in the telecom, banking and other industries. In 2019, he graduated from Stanford's online "Machine Learning" course.

TEAM

We are a team with experience since 2000, in multinationals and local organizations: General Electric (GE Money), ING, Coface, TIW - Mobifon (Vodafone), Orange and companies owned by investment funds.

Our services are specialized in data analysis for the purpose of obtaining decisions and their automation, with clients in Telekom and Banking industries.

Digital Transformation

We have built and teach course Digital Transformation for two MBA programs, one was joint program with Coles Business School, KSU Georgia USA.





Navigating the Cloud:

