

Predictive Analytics

Predictive analytics use of a wide variety of statistical and mathematical techniques that search data, identify interesting patterns and then make accurate predictions. Their increasing adoption is fueled by the converging trends of big data, ever-improving data analytics tools, and numerous demonstrated successes in new applications.

Predictive models make it possible to make more right decisions, more quickly, and with less expense. They can support human decisions to make them more efficient and effective, or used to automate an entire decision-making process. When applied in real time, they can help spot suspicious user behavior on the Web or to identify anomalous transactions that are inconsistent with a user's normal behavior, which might indicate fraudulent activity.

HIGH-VALUE APPLICATIONS FOR PREDICTIVE MODELING

While most business processes in most organizations have the potential to benefit from predictive modeling, situations where predictive models can be especially beneficial include:

- Processes that require a large number of similar decisions
- Where the outcomes have a significant impact, i.e., where there's a lot at stake in terms of money or lives
- Where there's abundant information in electronic data form available on which to base decisions and measure outcomes
- Where it's possible to insert a model calculation into the actual business process, either to automate decisions or to support human decision makers

INDUSTRY EXAMPLES

Health

Among healthcare providers, predictive analytics are being used to assess the clinical risks presented by individual patients, identify people who might be prone to chronic conditions or support clinical diagnoses.

Government

Governments are using predictive analytics in numerous ways, such as to predict:

- Risk that a benefit claim or tax return is fraudulent or contains errors
- Probability of a positive response to a specific unpaid debt intervention
- Risk of an offender repeating his or her offenses



Putting business value first with CGI Data2Diamonds

CGI's Data2Diamonds approach is based on the principle that data contains valuable insights ("diamonds") that can produce business improvements when put to work. The more high quality data you can access, and the better you can analyze it, the greater the potential for value. Our methodology comes from decades of experience implementing systems that derive value from data.

Learn more at

www.cgi.com/data2diamonds

Financial Services

Before approving a loan, or giving someone a credit card, or setting an overdraft limit on a bank account, financial institutions analyze data from a range of sources to arrive at a credit score—essentially a ranking of the probability that the applicant will make repayments on time.

Insurance

In assessing actuarial risk, insurance companies calculate the probability of a claim resulting from early death, illness or accident, to determine how expensive a policy holder is likely to be in the future. Based on the result, they decide whether the business should be accepted, and if so, the level of fee or premium to charge.

Retail

Retail companies use predictive analysis to assess consumer buying habits in order to promote relevant products and services to them. They also use it to identify what is likely to be the optimal approach to make the sale. These techniques are applied throughout the customer lifecycle to target acquisition of new customers, to meet service expectations and enhance customer satisfaction, and to cross-sell new products and services. The same approach is taken to customer retention, where predictive models are used preemptively to increase customer loyalty, as well as to target previous customers who might be won back from competitors.

WHY CGI

With more than a decade of experience in solving complex analytical problems for clients, CGI helps generate innovative solutions that can be rapidly deployed. Our experienced team of statisticians and analysts has worked across industries to perfect a wide range of algorithms and techniques.

Our predictive models provide business led solutions that make a difference. Our novel commercial options and reduced barriers to entry ensure that you get the maximum benefit for the smallest investment. Some of these options include running our models as a “software as a service” to minimize running costs or on a “risk-reward” basis to maximize your return.

We also have developed a number of pre-built, turnkey solutions that will plug into customer data and generate valuable patterns and insights, such as our decision engine platform. A variety of models can plug into data and form predictions of likely future events. Organizations can use this intelligence to then accurately target customers with tailored offers, products or services.

Our vision is to see all organizations place the consumer at the heart of their decision making. We help clients engage with each of their customers as individuals, resulting in improved customer profitability, increased retention, reduced risk and outstanding customer-centric experiences.

DATA2DIAMONDS AT A GLANCE

The goal of Data2Diamonds is to empower organizations to make the best use of their data to improve how they fulfill their missions, and create more value for stakeholders.

We encourage you to use the CGI Data2Diamonds methodology to:

- Maximize business value and adoption of big data analytics initiatives
- Develop data and analytics driven processes in your organization to deliver data-driven insights
- Grow your existing data and analytics landscape into a cost-effective and agile platform

We welcome the opportunity to help your organization transform data into diamonds. For more information, please visit www.cgi.com/big-data or email data2diamonds@cgi.com.