# Altair Knowledge Studio™

Decision Trees

Altair | Knowledge Works



Predictive Analytics is commonly defined as leveraging technology that learns from data analysis to predict the future behavior of people or processes to drive better decision making. To effectively deploy large scale operations such as marketing campaigns, financial risk and fraud detection strategies, or cross-sell / up-sell strategies that involve multiple product offerings and distribution channels, predictive analytics places a probability against the outcome. For example, putting everything known about a customer into a model can generate an output that will predict whether that customer is likely to buy a new product, cancel a subscription, or introduce financial risk to credit lending.

> "Using Knowledge Studio Decision Trees we're able to quickly pinpoint major variables which are significant in identifying the fraud, and how to create rules from those variables. Also, it's very easy to look at visualizations in the data and that helps us in building the strategy to counter fraud."
>
> Anita Xia, Risk Strategy
> TeamTD Bank

**Learn more:**
**altair.com/knowledgeworks**

Exploring the most predictive variables to better understand the relationship between them and a target business objective is enabled via segmentation. Classifying and profiling data into groups and applying different views can produce an output that quickly identifies which group to target with a strategy, and which to discount. Decision Trees from Knowledge Studio accelerates the ability to segment, profile, identify and rank the relationships between the variables used in a model against the business objective or hypothesis. Viewed by analysts such as Forrester and Gartner as a leader in visual profiling, Knowledge Studio Decision Trees provide an interactive and intuitive interface for building and exploring segments and discovering relationships between variables. Decision Trees make no assumptions about the data and allow data scientists and business analysts to explore unfamiliar datasets and identify potentially good predictors against what they are measuring for. With no coding required, users can:

- Leverage a powerful set of statistical algorithms against a complicated modelling task without having to create complex code
- Easily incorporate business knowledge and policies while building segments
- Fine tune parameters and attributes for extensive algorithm control if need be
- Let the model automatically show the relationship between variables, or manually determine where the model should display a variable relationship
- Quickly understand indicators of predictive behaviour

With the ability to export Trees for deployment in other analytical environments via automatic code generation, including SQL, SAS, SPSS, Java, R and Python, Decision Trees from Knowledge Studio elevate predictive analytics modelling and accelerate the understanding of a model's output. With exceptionally easy navigation feature such pan, zoom, collapsing and expansion, along with variable search capabilities and the ability to visually compare trees using side-by-side views, Knowledge Studio is ready to be your primary data science solution.