



New Technology from DIT

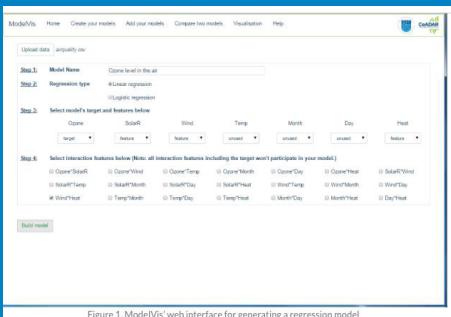
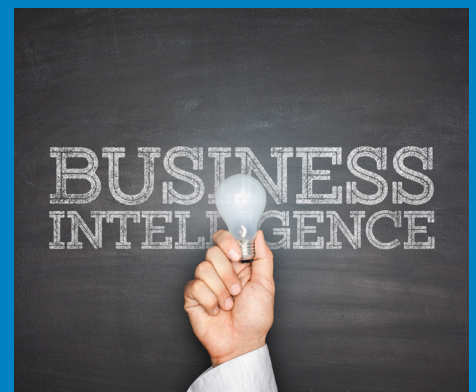


Figure 1. ModelVis' web interface for generating a regression model

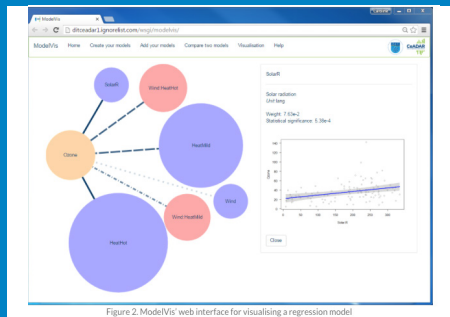


Figure 2. ModelVis' web interface for visualising a regression model

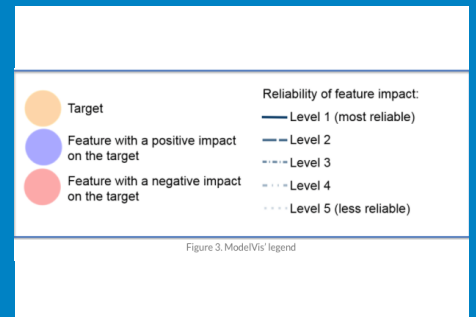


Figure 3. ModelVis' legend

ModelVis – An intuitive data visualisation system

The ModelVis application makes complex statistical regression results more digestible to a business audience.

The data visualisation is intuitively presented via an easy-to-use web-based interface.

Built, tested and executed in order to validate the proof of concept, ModelVis difference is based on:

- Allowing users to build and visualise regression models online.
- Offers a unique and easy-to-understand visualisation of

regression models.

- Allowing users to compare two models via a dedicated visualisation that highlights the differences between the models both visually and in text format.

With huge opportunity in the analytics market, estimated to be worth \$29.53 Billion by 2019, ModelVis makes a compelling and valuable addition to a massive addressable market.

The key characteristics of a regression model are:

- The regression weights, also known as regression coefficients, regression estimates or parameter estimates.
- The sign of each weight.
- A statistical significance associated with each weight.

These characteristics are associated with the model's features and interaction features (i.e. interaction terms or combined features for the purposes of regression).

ModelVis, a regression model visualisation system which is provided in an easy-to-use and easy-to-understand web-based interface.

Users can upload their regression models through a web form or upload them as a CSV file (see Figure 1).

ModelVis displays regression model characteristics via an interactive force graph that is easy for a business audience to understand (see Figure 2).

Each feature appears as a circle. (see Figure 3).



Above:

Applications

Data analysis is an increasingly important task for industry in helping make informed business decisions.

The ModelVis system solves the problem of communicating regression results to a business audience and will be of interest to companies who need to communicate modelling results to customers or to senior management who may not have an analytics background.

It will be particularly useful in the banking, insurance and finance sectors, as well as in sales driven business environments.

Opportunity

The Advanced Analytics market will be worth \$29.53 Billion by 2019, according to a report published by MarketsandMarkets

That figure is inclusive of sub segments such as Big Data Analytics, Social Analytics, Visual Analytics, Customer Analytics, Risk Analytics, Business Analytics, Statistical Analysis and Predictive Modelling.

Regression models aim to predict the value of a target depending on different features. They are commonly used for:

- Evaluating trends on sales estimates
- Analysing the impact of price changes
- Assessing risk (particularly relevant to the banking and finance sectors)

Advantages

While there are numerous regression model generators in the market, the visualisation integration provided by the ModelVis regression model ensures that it exceeds what competitors currently offer.

Its key advantages include:

- ModelVis allows users to build and visualise regression models online via a web browser.
- ModelVis offers a unique and easy-to-understand visualisation of regression models.

“ModelVis will be of interest to companies who need to communicate modelling results to customers or to senior management who may not have an analytics background.”

- ModelVis allows users to compare two models via a dedicated visualisation that highlights the differences between the models both visually and in text format.

ModelVis is written almost completely as a front-end interface, using JavaScript and therefore source code is directly available to anyone via the browser.

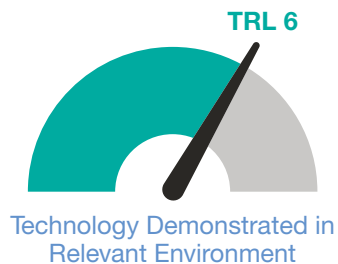
Stage of Development

ModelVis has been developed in the DIT School of Computing as part of CeADAR - the Enterprise Ireland funded Technology Centre for Data Analytics.

A prototype demonstrator has been built, tested and executed in order to validate the proof of concept.

DIT is currently seeking expressions of interest from potential licensees interested in using the technology for internal customer segmentation applications or business partners interested in deploying it as a commercial system. The technology may be licensed through the CeADAR Technology Centre.

Technology Readiness Level (TRL)



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