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***Data Visualisation and Analytics***

***Data8007***

***Assignment 2 – Evaluate and implement a visualisation technique to solve a problem; research and communicate a data analytics topic.***

Due on – Friday Week 13, no presentation required

Please submit your work via email to david.hawe@cit.ie. This assignment is worth 50% of the module. Where work is submitted up to and including 1 day late, 10% of the total marks available shall be deducted from the mark achieved. Where work is submitted up to and including 3 days late, 20% of the total marks available shall be deducted from the mark achieved. Work submitted 3 days late or more shall be assigned a mark of zero.

**Assignment**

The aim of this assignment is to investigate data visualisation methods and software packages for a dataset(s). A dashboard or similar should be generated using at least two packages (e.g. ggplot2, shiny, PowerBI, Tableau, Spotfire, … ). Note: the quality of the dashboard is important in terms of marks awarded.

This analysis must include a statistical analysis not used during this module. Examples could include principle component analysis (loadings and scores), partial least squares regression (VIP plot), GLMs, nonlinear or nonparametric regression (fit plots residuals) etc..

You should compare the different packages capabilities on your datasets and highlight strengths and weaknesses. You should clearly identify which package is the most appropriate for your dataset in your conclusions.

GIS data is a good choice. Some ideas are given below.

You need to submit a report detailing your data, the analytical methods used (750 - 900 words). Reference your work appropriately.

The marking scheme for this is:-

Technology and analytics used : - 75 marks

Report : - 25 marks

To gain a high mark, an element of individual thinking and research needs to be shown.

Ideas for GIS datasets

CSO data – overseas visitors to Ireland, population changes by county, births/deaths, www. cso.ie

Global volcanic eruptions

Global meteor strikes

Global terrorist attacks

Immigration patterns

UFO sightings

Other data sources

European Social survey, [www.europeansocialsurvey.org/](http://www.europeansocialsurvey.org/)