

ACTUARIAL DATA SCIENCE TRAINING: GET STARTED WITH CODING

WE ARE IN THE ERA OF ACTUARIAL DATA SCIENCE MODELLING - LEARN THROUGH CASE STUDIES WITH R

GI Data Science Training London

16 17 18 March 2020, 167 City Road, London EC1V 1AW

Basics of non-life pricing Introduction to GLMs	Advanced Methods of non-life pricing with R	Practical applications of machine learning in GI insurance
DAY 1: 16 March 2020	DAY 2: 17 March 2020	Day 3: 18 March 2020
<p>9h-10h30 Introduction to risk classification - From linear to generalised linear models - Poisson regression for claim counts</p> <p>10h45-12h30 Case study: Developing a new technical tariff for frequency</p> <p>13h30-15h30 - Gamma regression for attritional claims - Extreme value theory for large claims modelling - Case study: Developing a new technical tariff for cost</p> <p>15h45-17h30 - Case study: Final technical tariff - Other practical difficulties with GLMs</p> <p>This session could be useful for life actuaries looking for an introduction to GLM</p>	<p>9h-10h30 - Modelling continuous explanatory variables with Generalised Additive Models: methodology and examples - Penalised regression techniques (Lasso, Ridge, interaction detection, etc): methodology and examples</p> <p>10h45-12h30 - Introduction to supervised machine learning algorithms, regression trees & random forest - Example: Fitting a regression tree and random forest on frequency</p> <p>13h30-15h30 - Case Study: Regression tree and random forest model adjustment for cost - Gradient Boosting Model (GBM) - Example: Fitting GBM on frequency - Case Study: GBM adjustment for cost</p> <p>15h45-17h30 - Artificial Neural Networks ANN - Example: Fitting ANN on frequency - Case Study: ANN adjustment for cost</p>	<p>9h-10h30 - Data Management: Selection, Pre Analysis, Feature Engineering and Feature Selection - Case Study: Data analysis and features selection with random forest</p> <p>10h45-12h30 - Case Study: Continuous Variables categorisation using regression trees or clustering methods - Case Study: Application of GBM method to highlight interactions</p> <p>13h30-15h30 - Profitability and Competition analysis: profitability and positioning assessment, reverse engineering of competitors prices - Case study: Profitability analysis with regression trees</p> <p>15h45-17h30 Introduction to unsupervised machine learning algorithms (k-means and HAC): methodology and examples</p>

REGISTER FOR DAY 1

REGISTER FOR DAY 2

REGISTER FOR DAY 3

REGISTER FOR ALL 3 DAYS

A huge increase in data generation, data capture and data storage combined with significantly increased computing power is providing insurers with a unique opportunity to re-evaluate the value that their data can provide; and the technologies available to do that.

Enabling actuaries to embrace modern day data science tools and to work closely with data scientists is an important link that could give strategic advantages to insurers in the further development of actuarial modelling software.

Looking forward, the actuary will continue to evaluate key sources of data and need to find ways to incorporate data science that uses state of the art machine- learning and data technologies together with the actuary's business insights. We need to refresh our methods and make use of emerging technological advances.

Some are turning to programming languages like Julia, Python and R; among other. With the rise of open-source execution environments computational notebooks, programming is becoming more accessible and easy to use.

This provides an interesting alternative for actuaries to execute large amounts of statistical calculations and see the results with the latest data visualisation techniques.

FOR FURTHER INFORMATION EMAIL: info@actuartech.com