## Workshop 7: Inteligência artificial e Estatística aplicada à analise de dados

### Organizadores: Vítor Santos e Paulo Moura Oliveira

26 e 27 de Setembro de 2018

Auditório G0.08, ECT – Pólo I

14h30 – **Opening session – Paulo Oliveira**

14h35 – **1. Introduction to Data Mining – Vítor Santos**
Data Mining Context
Predictive and descriptive models
Data Mining Methodology

16h00 – **Intervalo para *Networking***

16h15 – **2. Data Preparation and Pre-processing – Irene Oliveira**
General aspects of data collection;
Treating common problems: Missing Data, Outliers, ...
Discretization
Reducing Input Space
Data Normalization & Standarization

18h00 – **3. Data Visualization – Vítor Santos**
Tufte's Principles
Information Visualization – Good & Bad Examples

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09h30 – **4. Descriptive models:**
RFM Analysis – Vítor Santos
Clustering Analysis (K-Means,...) – Irene Oliveira

11h00 – **Intervalo para *Networking***

11h15 – An Introduction to Artificial Neural Networks – Vítor Santos
Self-Organizing Maps – Vítor Santos

12h45 – **Almoço livre**

14h30 – **5. Clustering with Evolutionary Algorithms – Paulo Oliveira**

15h30 – **6. Predictive Models**
Linear regression, logistic regression – Irene Oliveira
Classification Trees – Irene Oliveira

16h25 – **Intervalo para *Networking***

16h40 - Neural Networks – Multilayer perceptron with Backpropagation training – Vítor Santos
Association rules -

17h30 – **Practical case – Critical Software**

18h00 – **Closure session – Paulo Oliveira**

Entidades: Reitoria