European Network for Business and Industrial Statistics

From Dashboards to Data Science Reactive Web Apps: Journey and Success Stories for Evidence-Based Decision Making in Industry and Business

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Data science is getting closer and closer to the core of Business. Statistical analysis is not anymore a task constrained to data analysts that end up in a results report for making. On the one hand, as Data Visualization and Machine Learning models are spreading throughout all business areas, it is needed something else than static reports. The deployment of Data Science products to be consumed by the stakeholders is a major area of development nowadays (MLOps). On the other hand, not only statistical experts are going to use the Data Science products. Decision making is carried out at different levels all over the organization, from process owners to executive managers. Thus, dynamic and interactive user interfaces that lead stakeholders through the knowledge discovery path steamed from Data Science are needed. Last but not least, well designed interfaces for cutting-edge models allows to tackle another of the main concerns of Data Science: interpretability.

In this work, one of the most amazing workflows for deploying and using Data Science products is showcased: The Shiny web applications framework. Shiny surged as an R package to build reactive web applications by using regular R code and nothing else. Shiny apps are more than a dashboard for observing what happened, but a sort of cockpit for anticipating what will happen and, even better, making decisions based on evidence to improve the future. The basics of the Shiny apps developement process will be shown, and some success stories in industry and business will be showcased.

Keywords

Data Science deployment; Interactive applications; R Shiny

Classification

Mainly application

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