

A night of Statistics, problem solving, and teamwork

Una notte di Statistica, risoluzione di problemi e lavoro di squadra

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Abstract *Stats under the Stars* is an event aimed at fostering the dynamic link between Statistics and young people. An all night-long challenge among teams of young data scientists taking place between the 8th and 9th of September 2015. A clash that represented not only an opportunity to meet and exchange ideas, but also a way to highlight the usefulness of Statistics as a key decision making tool.

Abstract *Stats under the Stars* è un evento che vuole stimolare il dinamismo che lega la Statistica al mondo dei giovani. Una sfida tra gruppi di giovani data scientist durata tutta la notte tra l'8 e il 9 Settembre 2015. Uno scontro che in realtà è stato un'occasione di incontro e confronto, ma anche un modo per sottolineare l'utilità della statistica come strumento chiave in ottica decisionale.

Key words: Data analytics challenge, Dynamism, Data science, Hackathon, Sexy job

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1 A Dynamic Science for Young People

Although mining information from data is a practice that crosses all our history and in itself does not represent anything new, Statistics keeps on being a young and hot science. This is what the New York Times and the chief economist of Google, Hal Varian, highlighted in 2009 when defined Statistics as the best choice for graduate students and the most sexy job in the next ten years, respectively. Fortune recently confirmed these expectations ranking Statistics as the best graduate degree for jobs in 2015. It guarantees not only one of the top median salaries, but leads also to jobs with lower stress and highest projected growth in 2022.

In the era of big data, globalization, the Internet, social networks and increased business competition on an international scale, Statistics is constantly and dynamically renewed to keep up with the times, new technologies, types of data, issues and interlocutors. A dynamic growth characterizing young people and to which they are increasingly and substantially contributing both in the academic and business world.

Stats under the Stars is an all-night data analytics challenge aimed at spreading this atmosphere also within the Italian community. An event organized to strengthen the link among young Italian statisticians, encourage their dialogue and stimulate their creativity in analyzing new data sources. We designed this event to be a fresh and sound chance to meet, compete and display the quality and dynamism of young Italian statisticians to the business and media world.

2 *Stats under the Stars* in Practice

Stats under the Stars (<http://sus.stat.unipd.it/>) is an all night-long event taking place in Padova between the 8th and 9th of September 2015. It represents a data challenge in which teams of young people competed in the analysis of a common dataset to answer hot business questions. The event has been thought to facilitate a broad and dynamic networking by welcoming young people from different fields covering Statistics, Computer Science, Economics, and others.

Today's Statistician needs to be efficient and able to answer questions fastly but without sacrificing the quality of the data analysis. He has to be creative and combine cleverly different sources of information if these can improve the final output. Teamwork is a key in his job and communication of the results of the analysis is fundamental to help transforming data into decisions. We designed the program of *Stats under the Stars* and the challenge features to stress these objectives. In particular, the dataset, business questions of possible interest as well as instructions on how to present the results have been provided only at the beginning of the night. Starting from these, teams were left free to proceed in their analysis and were allowed to utilize every possible source of information, software and analytic strategy. There was no chain to their creativity except a clock ticking until 7:30am and one hour food and cabaret break according to the young quote "*work hard, play hard*".

Evaluation criteria to select the top three teams have been defined consistently with the mood of the event. A panel of invited experts was asked to evaluate the works by combining both objective criteria (e.g. prediction quality) and subjective ones (e.g. best presentation, creative use of statistical techniques and others). *Stats under the Stars* has been endorsed by the Young section of the Italian Statistical Society and is a satellite of the SIS 2015 Statistical Conference "*Statistics and Demography: the Legacy of Corrado Gini*" which dedicated a specific session to allow the three top teams to present their work.

3 Looking Forward

Every Statistician knows (or should know) his job is sexy. However the communication with the Italian business and media world still lags behind the increasing key and substantial role of Statistics in many fields. *Stats under the Stars* aimed at taking a small step towards reducing this gap. This was additionally fostered by coupling *Stats under the Stars* with *Statistica e data science per il business* (<http://stat4business.stat.unipd.it/>) taking place on the 8th September 2015 in Padova. The latter represents an event aimed at relating statisticians working in industry, services, marketing and business, which were later invited to attend *Stats under the Stars* and meet the young teams while seeing them at work.