



WINTER SCHOOL 2021

**IN DATA ANALYTICS  
AND MACHINE  
LEARNING**

8 – 19 February, 2021  
Fribourg, Switzerland



Many firms and organizations have recognized the value of analyzing data based on quantitative tools like regression, machine learning, and deep learning

- for forecasting specific outcomes such as sales or prices: predictive analysis;
- for evaluating the causal impact of specific actions such as offering discounts or running marketing campaigns: causal analysis.

This permits improving the quality of decision making and thus increasing efficiency and competitiveness.

The “Fribourg Winter School in Data Analytics and Machine Learning” provides training in state-of-the-art quantitative tools for predictive and causal analysis. The one- to three-days-courses cover both introductory and more advanced topics, using the open source software packages “Python”, “R”, and “Knime”. “Python” and “R” are among the most popular programming languages in data science and statistics, while “Knime” is a user-friendly, flow-chart based graphical interface that does not require any programming skills. Among the topics covered in the various courses are

- regression techniques for multivariate statistical analysis;
- machine and deep learning algorithms like lasso, decision trees, random forests, and neural nets;
- text analysis to extract and statistically analyze text information from websites, like sentiments about products.

The working language will be English. **Due to the current Covid-19 situation, the winter school will take place fully online (rather than in presence in Fribourg) via “Microsoft Teams”. For this reason, participants will be provided with a Microsoft teams link for attending their chosen courses.**

Participants are free to attend all courses or to select a subset of courses offered in the winter school. The fees for the “Fribourg Winter School in Data Analytics and Machine Learning” are:

BA/MA/PhD students at the University of Fribourg	BA/MA/PhD students at other universities or academic researchers (e.g. post-docs and professors) at any university/research institution	Private companies or public sector employees
*Flat rate for all courses: <b>CHF 90</b>	Block 1: Python courses (8-10 Feb) <b>CHF 500</b>	Block 1: Python courses (8-10 Feb) <b>CHF 800</b>
	Block 2: Knime course (11 Feb) <b>CHF 200</b>	Block 2: Knime course (11 Feb) <b>CHF 300</b>
	Block 3: R courses (12-19 Feb) <b>CHF 600</b>	Block 3: R courses (12-19 Feb) <b>CHF 900</b>
	All courses: (8-19 Feb) <b>CHF 950</b>	All courses: (8-19 Feb) <b>CHF 1500</b>

\*Please note: Not all courses have to be attended.

The fee includes tuition, course materials, access to the faculty’s library, and internet access.

Online registration deadline: **Jan 31<sup>st</sup> 2021**

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For more information, visit: <https://www3.unifr.ch/appecon/en/further-education/>

or contact: [andrea.sommer-gauch@unifr.ch](mailto:andrea.sommer-gauch@unifr.ch)

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