ECSR 2019

Clinical Course C-01
26 September 2019, 14:30 – 18:00

Artificial intelligence / machine learning in psychiatry
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Course Directors:

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Description
Machine learning technologies have changed the face of multiple industries and are now seamlessly integrated into our everyday lives. The expectation is that these statistical approaches may also revolutionize medical care because of their ability to make predictions from complex data at an individual patient level. In psychiatry, multiple international teams are now using cutting-edge statistical approaches in a mission to create clinical tools that \ lead to the rapid personalization of diagnoses, prognoses, and treatments within the next 5-years.

Within this exciting context, it is critical for clinicians and researchers alike to understand what machine learning is, what it can and can't do, how to implement it, and what we need to consider to facilitate the safe and ethical clinical translation. In this workshop, we will address these major questions by building towards an understanding of what is required to make the mission successful.

The session is divided into three main parts that will:
1) start from the basics of describing what machine learning is, what are the fundamental elements, and what has been achieved thus far;
2) reinforce the concepts by displaying how a machine learning pipeline can be implemented in an interactive session where participants without coding experience will configure an analysis using software called NeuroMiner (www.pronia.eu/neurominer); and
3) in a round-table format that invites discussion, outline gold-standards for clinical translation that involve both practical and ethical aspects of introducing machine learning tools into the clinical environment. To end the course, we will then present a possible future for psychiatric practice before facilitating an audience discussion of pros, cons, and concerns. At the end of the course, we expect that participants will be better equipped to engage with an exciting new field and with critical ongoing dialogue concerning its implementation into clinical care.