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Introduction to Machine Learning and Artificial Intelligence

Thursday, 10 March 2022 11:00 (25 minutes)

As the amount of data collected from systems in operation increases, the need to effectively analyse this data to gain knowledge about the state of the system increases alike. Leveraging data-driven methods for this analysis allows us to process massive amounts of data more efficiently, as well as gain insights about our systems which we may otherwise have overlooked or not known of their presence altogether.

Machine Learning algorithms by design require large volumes of data to be able to accurately represent systems based on recorded data. This means that for systems which are highly measured, machine learning algorithms can be leveraged for further analysis. In addition, this representation that is learned from the data can be retained and employed for make future inferences without having to touch the data again. This is particularly useful for closed systems, for example, as inferences can be made in real-time allowing for timeous decision-making.

The applications of machine learning methods are far ranging and this talk will give an introductory overview of Machine Learning as well as a list of resources to help those who may be looking to learn how to apply such methods to their own work. It will also go over a very simplified example to show a machine learning model training cycle and some key aspects to think about when reviewing your trained model's metrics.

Abstract Category

Presenter: PHIRI, Mitchell (University of Johannesburg, South Africa)

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