

# Data Science Seminar Series

Thursday, January 20<sup>th</sup>, 3:30-4:30 pm

## **TITLE**

Keystroke Dynamics: Theory and Practice

## **SPEAKER**

Dr. Haytham El Miligi

## **ABSTRACT**

Keystroke Dynamics refers to a behavioural biometric that is used to identify users based on their typing pattern, rhythm, and speed.

Authentication using keystroke dynamics is becoming more popular everyday because of two main reasons. First, keystroke dynamics authentication can be easily integrated into existing smartphone and computer security systems with very minimal alteration and user intervention. Second, keystroke dynamics is a resettable biometric and doesn't require any special hardware technology. To identify users based on their keystroke dynamics profiles, we use machine learning techniques. Machine learning are used to build classification models that can accurately classify users based on their typing pattern, rhythm, and speed. In this talk, I will discuss the theory behind keystroke dynamics and the practical implementation of classification models using machine learning algorithms.

## **BIOGRAPHY**

Dr. Haytham El Miligi is an Associate Professor in the Computing Science Department at Thompson Rivers University. His research interests focus on machine learning applications in healthcare, security and education. This includes data analytics and federated learning techniques, big data framework solutions, analysis of behavioral biometric using deep learning techniques and detecting malicious activities on smartphones and IoT devices using reinforcement learning.

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