Deep Learning for Time-Series Classification

Full description

Dynamics on the Earth's surface are governed by continuous temporal processes that can be observed in discrete intervals by Earth observation satellites. Recent satellite constellations, such as Landsat-8 and Sentinel-2, cover the same location on Earth at regular temporal intervals. The increase in data availability and the development of data-driven methods enable advances in a variety of applications, such as vegetation modeling, climate forecasting, or precipitation nowcasting. This tutorial covers the latest developments in deep learning techniques for time series classification with application to Earth observation. Several mechanisms that often originated from related fields, like computer vision (e.g., convolutional neural networks) or natural language processing (e.g., recurrent neural networks, and attention mechanisms) have proven to be useful for this task. In this tutorial, we aim at providing a solid theoretical basis to understand these concepts. Practical sessions will also allow the participants to apply the presented techniques with hands-on code in Jupyter and Colab notebooks.

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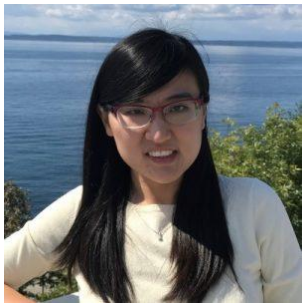

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