HASSAN ISMAIL FAWAZ

Data Scientist & Machine Learning Researcher

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EDUCATION

Université Haute-Alsace
PhD in Machine Learning
Sep 2017 – Present Mulhouse, France

Université de Bourgogne
Masters in Databases & Artificial Intelligence
Sep 2016 – Sep 2017 Dijon, France

Université Antonine
Masters in Software Engineering
Sep 2012 – Sep 2017 Beirut, Lebanon

SKILLS

Python, Java, C++, DBMS, Unix
Tensorflow, Keras, Scikit-learn
Machine Learning, Data Science
Writing, presenting, communication

EXPERIENCES

Deep Learning Lecturer
Université Haute-Alsace
Sep 2018 – Present Mulhouse, France
Giving an advanced course on deep neural networks.

Visiting Machine Learning Researcher
Monash University
Nov 2019 – Dec 2019 Melbourne, Australia
Classifying satellite image time series.

Machine Learning & Semantic Web Intern
Orange Labs
Mar 2017 – Sep 2017 Sophia Antipolis, France
Designing a dataset recommendation engine.

Data Privacy & Optimization
Université Antonine
Jun 2016 – Aug 2016 Beirut, Lebanon
Developing data anonymization technique with CPLEX.

Freelance Web Development
MradMCC
Mar 2016 – Aug 2016 Beirut, Lebanon
Creating a WordPress website that can be found here.

PARTICIPATION

- International Workshop on Machine Learning & Artificial Intelligence
- PRAIRIE Artificial Intelligence Summer School
- Learning from Data Streams and Time Series
- International Conference on Computer Assisted Radiology & Surgery
- International Deep Learning Summer School
- Lebanese Collegiate Programming Contest

AWARDS

- IEEE Big Data Student Travel Award
- Université Antonine Programming Contest

PROJECTS

InceptionTime
- In this project, we propose an Inception based network that applies several convolutions with various filters lengths for Time Series Classification (TSC). In contrast to networks designed for images, we are able to explore filters 10 times longer than recent Inception variants for image recognition tasks.

Deep learning for time series classification
- In this project, we study the current state-of-the-art performance of deep learning algorithms for TSC by presenting an empirical study of the most recent DNN architectures for TSC. We also provide an open source deep learning framework to the TSC community where we implemented each of the compared approaches and evaluated them on a univariate TSC benchmark (the UCR archive) and 12 multivariate time series datasets. By training 8730 deep learning models on 97 time series datasets, we propose the most exhaustive study of DNNs for TSC to date.

Interpretable surgical skills evaluation
- In this project, we designed a Convolutional Neural Network (CNN) to evaluate surgeon skills by extracting patterns in the surgeon motions performed in robotic surgery. Following the latter project, we provide an open source implementation of synchronizing multiple surgical training videos that would allow the surgeon to improve their training.

Transfer learning for time series data
- In this project, we performed an experimental study on how to choose the best source dataset for a given target dataset when classifying time series data.

Deep learning extension for sktime
- In this project, we provide an extension package for deep learning with Keras for sktime, a scikit-learn compatible Python toolbox for learning with time series and panel data.