

# Hassan Ismail Fawaz, MSc

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🌐 <https://github.com/hfawaz>

🌐 <https://hfawaz.github.io>

🎓 <https://bit.ly/hfawaz-google-scholar>

🐦 <https://twitter.com/hassanfawaz93>

## Employment History

- 2017 – 2020 📌 **PhD candidate.** [IRIMAS](#), [Université Haute Alsace](#), France.
- 2018 – 2020 📌 **Lecturer.** [ENSISA](#), [Université Haute Alsace](#), France.
- 2017 – 2017 📌 **Internship.** Data Services & Valorisation for Business, [Orange Labs](#), France.
- 2016 – 2017 📌 **Internship.** [TICKET Lab](#), [Université Antonine](#), Lebanon.
- 2016 – 2016 📌 **Freelance.** Website development - [www.mradmcc.com](http://www.mradmcc.com).
- 2015 – 2015 📌 **Internship.** Web application development, [Dar El Handasah](#), Lebanon.

## Education

- 2017 – 2020 📌 **PhD Machine Learning, Université Haute Alsace, France**  
*Temporal data analysis with surgical data science application.*
- 2016 – 2017 📌 **MSc Computer Science, Université de Bourgogne, France**  
*Second Class Honours. Databases & Artificial Intelligence.*
- 2011 – 2017 📌 **MSc Software Engineering, Université Antonine, Lebanon**  
*Fourth Class Honours. Software & Telecommunications Engineering.*

## Research Publications

### Journal Articles (under revision)

- 1 **Ismail Fawaz, H., Lucas, B., Forestier, G., Pelletier, C., Schmidt, D. F., Weber, J., ... Petitjean, F.** (2019). [InceptionTime: Finding AlexNet for Time Series Classification](#). Code is available on <https://github.com/hfawaz/InceptionTime>.

### Journal Articles (accepted)

- 1 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A.** (2019a, August). [Accurate and interpretable evaluation of surgical skills from kinematic data using fully convolutional neural networks](#). *International Journal of Computer Assisted Radiology and Surgery*. Code is available on <https://github.com/hfawaz/ijcars19>.
- 2 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A.** (2019b, January). [Deep learning for time series classification: a review](#). *Data Mining and Knowledge Discovery*. Code is available on <https://github.com/hfawaz/dl-4-tsc>.
- 3 **Forestier, G., Petitjean, F., Senin, P., Despinoy, F., Huauilmé, A., Ismail Fawaz, H., ... Jannin, P.** (2018, September). [Surgical motion analysis using discriminative interpretable patterns](#). *Artificial Intelligence in Medicine*, 91, 3–11.

### Conference Proceedings

- 1 **Ismail Fawaz, H., Forestier, G., Weber, J., Petitjean, F., Idoumghar, L., & Muller, P.-A.** (2019). [Automatic alignment of surgical videos using kinematic data](#). In *Artificial Intelligence in Medicine*. Acceptance rate is 21%. Code is available on <https://github.com/hfawaz/aime19>.

- 2 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2019c). [Deep Neural Network Ensembles for Time Series Classification](#). In *IEEE International Joint Conference on Neural Networks*. Code is available on <https://github.com/hfawaz/ijcnn19ensemble>.**
- 3 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2019d). [Adversarial Attacks on Deep Neural Networks for Time Series Classification](#). In *IEEE International Joint Conference on Neural Networks*. Code is available on <https://github.com/hfawaz/ijcnn19attacks>.**
- 4 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2018a). [Evaluating surgical skills from kinematic data using convolutional neural networks](#). In *Medical Image Computing and Computer Assisted Intervention*. (Oral selection rate 4%). Code is available on <https://github.com/hfawaz/miccai18>.**
- 5 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2018c). [Transfer learning for time series classification](#). In *IEEE International Conference on Big Data*. Selection rate 18.9%. Code is available on <https://github.com/hfawaz/bigdata18>.**





## Workshops

- 1 **Ismail Fawaz, H., Forestier, G., Weber, J., Idoumghar, L., & Muller, P.-A. (2018b). [Data augmentation using synthetic data for time series classification with deep residual networks](#). Code is available on <https://github.com/hfawaz/aaltd18>.**





## Miscellaneous Experience

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### Visiting researcher

- 2019     **Google Brain.** One day visiting [Neil Zeghidour](#).  
           **Sorbonne University.** One day visiting [Jean-Yves Franceschi](#).  
           **Open University of The Netherlands.** One day visiting [Daniele Di Mitri](#).
- 2018     **Wayne State University.** One day visiting [Abhilash Pandya](#).

### Grants

- 2019     **Mésocentre of Strasbourg.** [1.6 million GPU computing hours](#).  
 2018     **Mésocentre of Strasbourg.** [1.6 million GPU computing hours](#).  
 2017     **NVIDIA Corporation GPU Grant.** [Quadro P6000](#).  
           **Coursera Financial Aid.** [Deep learning speciality](#).

### Certifications

- 2019     **Participation.** [International Workshop on Machine Learning & Artificial Intelligence](#).  
           **Participation.** [PRAIRIE Artificial Intelligence Summer School](#).  
           **Participation.** [Learning from Data Streams and Time Series](#).  
           **Participation.** [International Conference on Computer Assisted Radiology & Surgery](#).
- 2018     **Volunteering.** [IEEE International conference on Big Data](#).  
           **Participation.** [International Summer School on Deep Learning](#).
- 2017     **Participation.** Cisco CCNA 1, 2, 3 & 4.
- 2016     **Participation.** Lebanese Collegiate Programming Contest.  
           **Participation.** Advanced Programming & Algorithms Boot Camp.

## Miscellaneous Experience (continued)

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2015     **Participation.** Lebanese Collegiate Programming Contest.

### Awards

2018     **IEEE International Conference on Big Data.** [Student Travel Award](#).

2016     **First place.** Université Antonine Programming Competition.

2015     **Second place.** Université Antonine Programming Competition.


### Talks & presentations


2019     **TsDays.** Apprentissage par transfert pour la classification de séries temporelles.

2018     **French society of computer science.** What to do with your PhD?

 **GDR-MADICS.** Interpretable evaluation of surgical skills.

### Teaching

2019     **Web programming.** Engineering students in Computer Science - 24 hours.

2018     **Deep Learning.** M.Sc. students in Computer Science - 20 hours.

### Conference committee

2019     **ORASIS.** [Journées francophones des jeunes chercheurs en vision par ordinateur](#).

 **AE.** [Biennial International Conference on Artificial Evolution](#).

### Workshop committee

2019     **AALTD.** [ECML/PKDD Workshop on Advanced Analytics & Learning on Temporal Data](#).

 **OR.** [MICCAI Workshop on OR 2.0 Context-Aware Operating Theaters](#).

### Reviewer

2019     **IEEE TKDE.** [IEEE Transactions of Knowledge and Data Engineering](#).

 **IEEE JBHI.** [Journal of Biomedical and Health Informatics](#).

 **MICCAI.** [Medical Image Computing and Computer Assisted Intervention](#).

 **IEEE/CAA JAS.** [Journal of Automatica Sinica](#).






 **AIRE.** [Artificial Intelligence Review](#).

### Open Source Projects

2019     **sktime-dl.** [An extension package for deep learning with Keras for sktime](#).

## Skills

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Languages	 English (TOEIC-955), French (B2), German (B1) & Arabic.
Development	 Python, Java & Slurm Workload Manager.
Databases	 MySQL, Neo4J, Protégé & Elasticsearch.
Web Dev	 HTML, CSS, JavaScript, Apache Web Server & Tomcat Web Server.
Misc.	 Academic research, teaching, $\LaTeX$ typesetting & publishing.