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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.
- 2015 – 2015 **Internship.** Web application development, Dar El Handasah, Lebanon.

Education

- 2017 – 2020 **Ph.D. Machine Learning, Université Haute Alsace, France**
Temporal data analysis with surgical data science application.
- 2016 – 2017 **M.Sc. Computer Science, Université de Bourgogne, France**
Second Class Honours. Databases & Artificial Intelligence.
- 2011 – 2017 **M.Sc. 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>.

Skills

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.

Miscellaneous Experience

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](#).

Visiting researcher

- 2019 ■ **Sorbonne University.** [Jean-Yves Franceschi](#).
- **Open University of The Netherlands.** [Daniele Di Mitri](#).
- 2018 ■ **Wayne State University.** [Abhilash Pandya](#).




Certifications

- 2019 ■ **Participation.** [PRAIRIE Artificial Intelligence Summer School](#).
- **Participation.** [Learning from Data Streams and Time Series](#).
- **Participation.** [International Conference on Computer Assisted Radiology & Surgery](#).




Miscellaneous Experience (continued)

- 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.
- 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.](#)