



## EL JURDI, ROSANA

### R&D Engineer in Deep Learning

### CONTACT

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### SKILLS

#### Programming

Python ●●●●●●●●  
MATLAB ●●●●●●●●  
C++ ●●●●●●●●  
HTML ●●●●●●●●  
JavaScript ●●●●●●●●

#### Software & Tools

Data Handling & Analysis ●●●●●●●●  
(eg. NumPy, SciPy, pandas)  
Visualisation ●●●●●●●●  
(eg. Matplotlib, gnuplot)

SLURM ●●●●●●●●  
PyTorch ●●●●●●●●  
TensorFlow ●●●●●●●●

#### Languages

English ●●●●●●●●  
French ●●●●●●●●  
Arabic ●●●●●●●●  
(Native Language)

## PROFESSIONAL EXPERIENCE

- **R&D in Deep Learning** (Oct 2021 - Present)  
*LITIS Lab, Université de Rouen, Normandie*  
*Directors: Paul Honeine, Pascal Vasseur, Yohan Depuis*  
Project: Omnidirectional Image Analysis and Segmentation
- **Ph.D. in Deep Learning** (Oct 2018 - Oct 2021)  
*LITIS Lab, Université de Rouen, Normandie*  
*Directors: Paul Honeine, Caroline Petitjean, Fahed Abdallah*
  - **Research Activities**
    - **Project:** Medical Image Segmentation using Deep CNNs in Fully and Weakly Supervised Frameworks.
    - Multi-GPU processing via CUDA and SLURM (CRIANN servers)
    - Deep learning (deep model design, loss design...)
  - **Teaching at Institut Polytechnique UniLaSalle, Rouen**
    - Preparation of courses, TD, and TP for first year engineering cycle, international formation in Probability, Functions of one variable, Integrals, Python and C++ programming.
    - Preparation of seminars in Deep Learning for Master in Data Science
  - **International Collaboration at Eindhoven University of Technology**
    - Visiting researcher (Feb.2020)
    - Awarded the PHC Van Gogh mobility scholarship
    - Research collaboration with Dr. Veronika Cheplygina
  - **Other Activities**
    - Ph.D. representative at the LITIS laboratory council
    - Co-advisor of two M1 students in Data Science, Université de Rouen
    - Organizer of the Doctoral Seminars in Deep Learning at the LITIS
- **Research Assistant at the American University of Beirut** (Oct-Nov 2018)
  - Project on multi-modal CNNs with text and image data
- **Research Engineering Internship at Lebanese University** (Mar- Sept 2018)
  - Twitter Sentiment Analysis using Convolutional Neural Networks
  - Annotation of a novel multi-label twitter dataset
- **Research Internship at AIIA Solutions, Lebanon** (July-Aug 2017)
  - Route Optimization via heuristic algorithms
  - Data Analysis via Python, MySQL, eclipse and Django
  - Web Development via JavaScript and HTML

## EDUCATION

- 🎓 2018-2021 **Ph.D. in Informatics and Deep Learning**  
*LITIS Lab, Université de Rouen, Normandie*
- 🎓 2017-2018 **M.Sc. in Robotics and Intelligent Systems**  
*Co-diplomation between the Université Technique de Compiègne, France and Lebanese University, Beirut*
- 🎓 2013-2018 **Engineer in Electrical and Electronics**  
*Lebanese University, Faculty of Engineering, Beirut*

## PUBLICATIONS

- **Journals:**
  - R. El Jurdi, C. Petitjean, P. Honeine and F. Abdallah, "BB-UNet: U-Net With Bounding Box Prior," in IEEE Journal of Selected Topics in Signal Processing, vol. 14, no. 6, pp. 1189-1198, Oct. 2020
  - R. El Jurdi, C. Petitjean, P. Honeine, and F. Abdallah, "CoordConv-Unet: Investigating CoordConv for Organ Segmentation," in Innovation and Research in BioMedical engineering (IRBM), 2021 (in press)
  - R. EL Jurdi, C. Petitjean, P. Honeine, V. Cheplygina, and F. Abdallah, "High-Level Prior-Based Loss Functions for Medical Image Segmentation: A Survey," in Computer Vision and Image Understanding, 2021 (submitted, in revision)
- **Conferences:**
  - R. El Jurdi, C. Petitjean, P. Honeine, V. Cheplygina, and F. Abdallah, "A surprisingly effective perimeter-based loss for medical image segmentation," in Proceedings of the Medical Imaging with Deep Learning conference (MIDL), Lübeck, Germany, 7 - 9 July 2021
  - R. El Jurdi, T. Dargent, C. Petitjean, P. Honeine, and F. Abdallah, "Investigating coord-conv for fully and weakly supervised medical image segmentation," in Proceedings of the 10th International Conference on Image Processing Theory, Tools and Applications (IPTA), Paris, France, 9 - 12 Nov. 2020
  - R. El Jurdi, C. Petitjean, P. Honeine, and F. Abdallah, "Organ segmentation in CT images with weak annotations: A preliminary study," in Proceedings of the 27th GRETSI Symposium on Signal and Image Processing, Lille, France, 26 - 29 Aug. 2019