



PAUL MELKI

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EDUCATION

PhD CIFRE <i>Deep Learning, Statistics, Computer Vision</i> University of Bordeaux IMS, Signal & Image Processing Group	Mar. 2022 – Mar. 2025 Bordeaux, France
Master of Science <i>Applied Mathematics: Statistics, Econometrics</i> Toulouse School of Economics	Aug. 2019 – Aug. 2021 Toulouse, France
Bachelor of Science <i>Major: Computer Science – Minor: Economics</i> University of Balamand	Aug. 2016 – July 2019 Al-Koura, Lebanon

WORK EXPERIENCE

R&D Engineer – AI & Vision EXXACT Robotics	Mar. 2022 – <i>current</i> Épernay/Lyon, France
Teaching Assistant – Statistics & Machine Learning Bordeaux INP / IUT de Bordeaux / Bordeaux Sciences Agro	Sep. 2022 – <i>current</i> Bordeaux, France
Data Science Intern EXXACT Robotics	Apr. 2021 – Oct. 2021 Épernay, France
Statistical Consultant BVA Xsight	Oct. 2020 – Mar. 2021 Toulouse, France
Shipping Intelligence Intern Signal	May 2020 – Jul. 2020 Athens, Greece (<i>remote</i>)

PUBLICATIONS

<i>Uncertainty Quantification by Conformal Prediction for Agricultural Computer Vision</i> Melki, Bombrun, Diallo, Dias & Da Costa <i>Precision Agriculture</i>	Dec. 2023 <i>submitted</i>
<i>Active Learning for Efficient Annotation in Precision Agriculture</i> Van Marrewijk, Dandjinou, Rustia, Franco Gonzalez, Diallo, Dias, Melki & Blok <i>Plant Phenomics</i>	Dec. 2023 <i>in draft</i>
<i>Group-Conditional Conformal Prediction via Quantile Regression Calibration for Crop and Weed Classification</i> Melki, Bombrun, Diallo, Dias & Da Costa <i>IEEE/CVF International Conference on Computer Vision Workshops</i>	Oct. 2023
<i>A Study of Pixelwise Segmentation Metrics using Clustering of Variables and Self-Organizing Maps</i> Melki, Bombrun, Millet, Diallo, Elchaoui Elghor & Da Costa <i>Acta Horticulturae</i>	Mar. 2023
<i>Exploratory Analysis on Pixelwise Image Segmentation Metrics with an Application in Proximal Sensing</i> Melki, Bombrun, Millet, Diallo, Elchaoui Elghor & Da Costa <i>Remote Sensing</i>	Feb. 2022

COMMUNITY INVOLVEMENT

Bordeaux AI Reading Group Co-initiator and co-organiser of the group with monthly sessions on AI articles proposed by PhD students + admin of Discord server (60+ members from IMS, LaBRI, INRIA, IMB, I2M...)	Apr. 2023 – <i>ongoing</i>
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SKILLS

Languages: English (C2), French (C2), Arabic (Native), Greek (A1)
Programming: Python, R, Java, JavaScript, C++, Stata, SAS, Assembly
Frameworks: PyTorch, TensorFlow, Keras, OpenCV, Tidyverse, Scikit, etc.