

Jade Eva Guisiano

Postdoctoral Fellow

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Google Scholar

EXPERIENCE	Postdoctoral Fellow, Tsinghua Institute of Energy, Environment and Economy 2024- • Shuimu Tsinghua Scholar Program • Supervision: Pr. Zhang Da • Automated policy guidance for methane emissions mitigation in the fossil fuel industry UN Consultant Climate and Energy Branch, UN Environment Programme 2022-2024 • IT team support to deploy PhD related methods Doctoral Candidate, Sorbonne Université and UN Environment Programme 2021-2024 Supervised by Thomas Lauvaux, Éric Moulines and Jérémie Sublime, funded by ministerial grant EDITE • Develop an automated deep learning method to associate methane plume to concerned oil and gas infrastructures (parts of IMEO and MARS projects) • Determination and forecasting of oil and gas infrastructures emission profile UN Researcher-consultant in Innovative Technology, UN Environment Programme 2020–2021 • Development of the SDG-Meter tool, a deep learning based solution to automatically and quantitatively linked government proposal to concerned Sustainable Development Goals (SDGs). • Constitution and animation of an expert consortium around the classification methods of the SDGs, Academic chair management (interns and students project supervision, hackathon organization) Research Engineer, ISEP - Data sciences, signal and image processing laboratory 2019–2020 Supervised by Raja Chiky • Project FEDER-IDEAC in collaboration with Cap2020 : Short-term and fine mesh weather forecasting for the optimization of agricultural exploitation based on the development of a new ensemble learning model. Research Intern, Montreal Computer Science Research Center (CRIM) Jun–Sept 2018 Supervised by Luis Da Costa and Jean-Philippe Nantel • Deep Learning applied to graph : Extraction and processing of graph information by convolutional neural networks (Application of an innovative theoretical method on real use cases)
EDUCATION	Ph.D. Computer Science & Mathematics, Sorbonne Université & École Polytechnique 2024 M.S. Computer Science , Université Lumière Lyon II 2018 B.S. Mathematics & Computer Science, Université Lumière Lyon II 2016
TEACHING	Lecturer for engineering cycle, ISEP 2019-2024 • Mathematics (Probability and Statistics) 300h • AI and Optimization 61h • Information systems architecture 30h
INTERNS SUPERVISION	• Zuzanna Skoczylas, Harvard & Tsinghua: "Oil and Gas infrastructures self-supervised GPT guided detection and recognition " 2025 • Sina Mohammadi, Stanford: "Oil and Gas site supervised detection and recognition with satellite image" 2023

	• Jhonathan Yismaw Ewunetie, Stanford : "Optimized BERT for automatic text classification by Sustainable Development Goals " 2022 • Rohit Anand Gupta, Rennes School of Business: "Optimization and Automation of multi-layered ensemble learning for short-term Forecasting in Agro-Climatology" 2020 • Liu Xiaoyang, ISEP: "Deep Learning/NLP solution deployment" 2020
VOLUNTEERING	Core Team Member, Climate Change AI (CCAI) since 2022 • Summer School organization (courses and tutorial review, lecturer, recruitment) • International Conference Workshop Reviewer (NeurIPs, EDS) • CCAI Grant Programme Reviewer • CCAI COP28 Representative Member
AWARDS	Top 100 projects solving problems related to the 17 United Nations Sustainable Development Goals, SDG-Meter solution - 9th position on 100 International Research Center on Artificial Intelligence under the auspices of UNESCO (IRCAI) 2022 Tsinghua University Shuimu scholarship 2024
VALORISATION	Computer Vision for Earth Observation, IEEE GRSS and IADF School Sept 2023 The Digital4Sustainability Learning Path, UNSSC Sept 2023 AI for Society, Hi!Paris Sept 2022 Oxford Machine Learning Summer School, Oxford Sept 2021 Digital for our Planet, European Commission - Connect University Sept 2021
COMPETENCES	Languages French (<i>native</i>), English (<i>Fluent</i>), Spanish (<i>basic</i>) Techniques Python, Matlab, QGIS, GIS, L ^A T _E X, Inkscape, git.
SELECTED TALKS & PANELS	Invited Panelist. <i>Digital Solutions and Data Infrastructure Empowering Sustainable Finance.</i> Panel discussion at Cambodia: Building a Sustainable Finance Ecosystem , United Nations ESCAP (online), June 3, 2026. Invited Panelist. Panel contribution on AI, digital solutions, and data systems for climate-resilient finance at Strengthening Samoa's Financial System to Enhance Resilience to Climate-Related Risks , United Nations ESCAP, March 25–26, 2026. Invited Speaker. <i>Applying Machine Learning to Operational Meteorology.</i> Royal Meteorological Society (RMetS), London, United Kingdom, March 6, 2024.
PUBLICATIONS	[1] J.E. Guisiano, D. Barretta, E. Moulines, T. Lauvaux, J. Sublime. 2024. Object Detection Models Sensitivity & Robustness to Satellite-Based Adversarial Attacks <i>IEEE International Symposium on Geoscience and Remote Sensing (IGARSS'24)</i> [2] J.E. Guisiano, T. Lauvaux, Z. Tzompa-Sosa, E. Moulines, J. Sublime. 2024. Artificial Intelligence for Dynamic and Intelligent Methane Inventory. <i>European Geoscience Union (EGU'24) General Assembly</i> [3] J.E. Guisiano, E. Moulines, T. Lauvaux, J. Sublime. 2023. Artificial Intelligence for Methane Mitigation : Through an Automated Determination of Oil and Gas Methane Emissions Profiles <i>Conference on Neural Information Processing Systems - Climate Change AI (NeurIPs'23)</i>

- [4] J.E. Guisiano, E. Moulines, T. Lauvaux, J. Sublime. 2023. Oil and Gas Automatic Infrastructure Mapping: Leveraging High-Resolution Satellite Imagery through fine-tuning of object detection models. *International Conference on Neural Information Processing (ICONIP'23)*
- [5] J.E. Guisiano, T. Lauvaux, E. Moulines, J. Sublime. 2023. O&GProfile : An automated method for attribution of satellite methane emissions detections to oil and gas sites and operators. *International Conference on Machine Learning and Data Mining (MLDM'23)*
- [6] A. Lorente, D. Zavala-Araiza, D. Varon, L. Shen, Y. Zhang, M. Liu, P. Veeffkind, O. Schneising, M. Buchwitz, J. Guisiano, A. d'Aspremont, R. Gautam, J. Warren, M. Omara. 2023. Comprehensive synthesis of TROPOMI-based methane emissions from the Permian basin estimated with state-of-art methodologies. *International Workshop on Greenhouse Gas Measurements from Space (IWGGMS'23)*
- [7] J.E. Guisiano, T. Lauvaux, C. Cifarelli, E. Moulines, J. Sublime. 2023. O&GProfile: Automated attribution of GHGSat point source methane emissions detections to O&G infrastructures for site emissions profile analysis (Permian). *European Geoscience Union (EGU'23) General Assembly*
- [8] J. Guisiano, R. Chiky, J. De Mello. 2022. SDG-Meter: A deep learning based tool for automatic text classification of the Sustainable Development Goals. *Asian Conference on Intelligent Information and Database Systems (ACIIDS' 22)*
- [9] R.A. Gupta, X Liu, J Guisiano, J. Orensanz, S. Ahvar. 2021. Optimization and Automation of Multi-Layered Ensemble Learning for Short-Term Forecasting in Agro-Climatology. *Extraction et Gestion des Connaissances - TECHENV (EGC'21)*
- [10] J. Guisiano, R. Chiky. 2021. Automatic classification of multilabel texts related to Sustainable Development Goals (SDGs). *Extraction et Gestion des Connaissances - TECHENV (EGC' 21)*
- [11] J. Guisiano, R. Chiky, J. Orensanz, and S. Ahvar. 2020. Multilayered Ensemble Learning for short-term forecasting in agro-climatology. *International Conference on Computer and Technology Applications (ICCTA'20)*.