

Nikola Milojevic-Dupont

CONTACT INFORMATION	EUREF-Campus, Torgauer Str. 12–15, building 19, office 1.01, 10829 Berlin, Germany	milojevic@mcc-berlin.net milojevicdupontnikola.github.io @Nikola_MD Google scholar
RESEARCH INTERESTS	Topics: Climate change mitigation; Urban sustainability, planning & morphology; Buildings; Mobility Methods: Machine learning; Geographical information system; Energy modelling	
EDUCATION	Technische Universität Berlin , Berlin, Germany PhD candidate, 2018–2022 (expected) Thesis advisor: Prof. Dr. Felix Creutzig AgroParisTech, Ecole des Ponts ParisTech, School for Advanced Studies in the Social Sciences (EHESS), Paris Nanterre University , Paris, France M.S. in Environmental Economics, 2016–2017 Major in Integrated Assessment Modelling University of Paris 1 Pantheon-Sorbonne , Paris, France M.S. in International Economics, 2015–2016 Best of class University of Paris 1 Pantheon-Sorbonne , Paris, France B.S. in Economics, 2011–2015	
PROFESSIONAL EXPERIENCE	Mercator Research Institute on Global Commons and Climate Change (MCC) , Berlin, Germany PhD student researcher, 2018–Present Potsdam Institute on Climate Impact Research (PIK) , Potsdam, Germany Guest researcher, 2017(Aug.)–2017(Oct.) Potsdam Institute on Climate Impact Research (PIK) , Potsdam, Germany Research assistant to Dr. Nico Bauer, 2017(Mar.)–2017(Aug.)	
PEER-REVIEWED JOURNAL PUBLICATIONS	4. Tackling climate change with machine learning. Rolnick, D., Donti, P. L., Kaack, L. H., Kochanski, K., Lacoste, A., Sankaran, K., Ross AS, Milojevic-Dupont, N., Jaques, N., Waldman-Brown, A. Luccioni, A., Maharaj, T., Sherwin, E. D., Mukkavilli, S. K., Kording, K. P., Gomes, C., Ng, A. Y., Hassabis, D., Platt, J. C., Creutzig, F., Chayes. F. & Bengio, Y. (2022) <i>ACM Computing Surveys</i> (In press) 3. Learning from urban form to predict building heights. Milojevic-Dupont, N., Hans, N., Kaack, L. H., Zumwald, M, Andrieux, F., de Barros Soares, D., Lohrey, S., Pichler, P.P. & Creutzig, F. (2020) <i>PLoS ONE</i> 15(12): e0242010	

	<p>2. Machine learning for geographically differentiated climate change mitigation in urban areas. <u>Milojevic-Dupont, N., & Creutzig, F. (2020). <i>Sustainable Cities and Society</i>, 102526.</u></p> <p>1. Fair street space allocation: ethical principles and empirical insights. Creutzig, F., Javaid, A., Soomaroo, Z., Lohrey, S., <u>Milojevic-Dupont, N., Ramakrishnan, A., ... & Weddige, U. (2020). <i>Transport Reviews</i>, 1-23</u></p>
PEER-REVIEWED CONFERENCE PROCEEDINGS	<p>3. Understanding the impact of the built environment on travelled vehicle kilometres in Berlin, Felix Wagner, <u>Milojevic-Dupont, N., Franken L., Zekar, A., Thies, B., Koch, N., and Creutzig, F. (2021) <i>The 28th International Seminar of Urban Form (ISUF)</i></u></p> <p>2. Estimating energy demand of buildings ...by learning their heights, <u>Milojevic-Dupont, N., Pichler, P.P., Kaack, L. H., Lohrey, S., & Creutzig, F. (2019) <i>OpenStreetMap State Of The Map</i></u></p> <p>1. Low-carbon urban planning with machine learning, <u>Milojevic-Dupont, N., & Creutzig, F. (2019) <i>Climate Change AI workshop at the International Conference on Machine Learning (ICML)</i></u></p>
MANUSCRIPTS UNDER REVIEW	<p>Open government geospatial data on buildings for planning sustainable and resilient cities. Biljecki, F., Chew, L. Z. X., <u>Milojevic-Dupont, N., Creutzig, F. (2021) Submitted to <i>npj Urban Sustainability</i>. Preprint: arXiv:2107.04023.</u></p>
CONFERENCE PRESENTATIONS	<p><i>Mapping 200 million European buildings in 2.5D to support policy-making</i>, Data for Policy conference, 2021</p> <p><i>Estimating energy requirements for thermal comfort in the European Union at individual building level</i>, International Energy Workshop, 2021</p> <p><i>Estimating energy demand of buildings ... by learning their heights</i>, OpenStreetMap State Of The Map, 2019</p> <p><i>Estimating latent energy demand of buildings with open data</i>, 13th Conference of the International Society for Industrial Ecology (ISIE) - Socio-Economic Metabolism Section, 2019</p> <p><i>Low-carbon urban planning with machine learning</i>, Spotlight presentation, Climate Change AI workshop at the International Conference on Machine Learning (ICML), 2019</p>
OTHER PRESENTATIONS	<p><i>Tackling climate change with machine learning</i>, Panel discussion at the United Nations Environment Programme's Digital Transformation Conference for Environmental Sustainability, 2021</p> <p><i>Data-driven policy making for sustainable cities</i>, Panel discussion at Artificial Intelligence for Sustainable Cities Network Malaysia, 2021</p> <p><i>Tackling climate change with machine learning</i>, Keynote presentation at Machine Learning Week Europe, Predictive Analytics World, 2021</p>

Tackling climate change with machine learning (in urban areas), Guest lecture at the Lee Kuan Yew Center for Innovative Cities Singapore, 2021

Tackling climate change with machine learning, German AI Association (KI Bundesverband), 2020

AI for sustainable urban planning (in French), Week on Cities and AI, University of Paris 1 Pantheon-Sorbonne, Chair Entrepreneurship, Territory, Innovation, 2020

Summary of the Tackling Climate Change with Machine Learning paper (with the CCAI team), TEDx Countdown Climate Change AI, 2020

Sustainable urban planning with machine learning, Cimpatico Studios, 2020

Can machine learning help the transition to low-carbon mobility?, AGYA Workshop Governance of Smart Mobility Data, Reiner Lemoine Institute, 2019

Deploying artificial intelligence to climate change mitigation semantics: a systematic review, Berlin International Graduate School in Model and Simulation based Research (BIMoS) PhD seminar, 2019

Upscaling urban climate solutions with ML approaches (with Felix Creutzig), TU Berlin Machine Learning group PhD seminar, 2018

PROGRAM
ORGANIZATION

International Conference on Learning Representations (ICLR)
Energy day of the Climate Change AI workshop (co-organizer), 2019

Applied Machine Learning Days, EPFL
Climate Change AI track (lead organizer), 2019

Women in Data Science Conference, Stanford University
WiDS Datathon (committee member), 2021

PROFESSIONAL
SERVICE

Climate Change AI
Climate Change AI is a global organization aiming facilitate meaningful work in machine learning for tackling climate change.

Founding member (2019)
Content committee chair (2021–present)
Community lead for buildings and transportation (2020–present)

Journals (Reviewer): Applied Energy, Journal of Industrial Ecology, PeerJ Computer Science

Conferences (Meta-Reviewer): Climate Change AI workshop at the International Conference on Machine Learning (ICML)

Conferences (Reviewer): Climate Change AI workshop at the Conference on Neural Information Processing Systems (NeurIPS), Climate Change AI workshop at the International Conference on Machine Learning (ICML), Climate Change AI workshop at the International Conference on Learning Representations (ICLR)

	Grants (Reviewer): AI4CITIES (public procurement)
SUPERVISION EXPERIENCE	<p>Theses</p> <p>Andreas Meyer, M.S thesis, 2020–2021 Title: <i>Building Height Prediction using Convolutional Neural Networks</i> Day-to-day supervisor, main supervisor: Felix Creutzig</p> <p>Other</p> <p>Paul Monat, Internship, 2021(June)-2021(Sep.)</p> <p>Marvin Bensch, Research Assistant, 2021(Jan.)-2021(June)</p> <p>Nicolai Hans, Internship, 2020(Feb.)–2020(Aug.) Currently PhD candidate at Humboldt Universität zu Berlin in Statistics Published together 3.</p>
SELECTED PUBLICITY	<p>TU Berlin (in German), press release, <i>KI hebt Nachhaltigkeitspotenzial im Städtebau</i>, 2020</p> <p>MIT Tech Review, article, <i>Here are 10 ways AI could help fight climate change</i>, 2019</p> <p>National Geographic, article, <i>How artificial intelligence can tackle climate change</i>, 2019</p> <p>The Verge, article, <i>Here’s how AI can help fight climate change according to the field’s top thinkers</i>, 2019</p> <p>MCC Berlin, press release, <i>Tackling climate change with artificial intelligence</i>, 2019</p>
COMPUTER SKILLS	<p>Programming languages: Python (proficient), R (knowledgeable)</p> <p>High-performance computing: SLURM (proficient)</p> <p>Machine learning software: Keras, Scikit-learn, XGBoost (proficient)</p> <p>Geographical information software: geospatial Python stack, QGIS (proficient), ArcGIS (knowledgeable)</p> <p>Databases: SQL, Postgres, PostGIS (knowledgeable)</p>
OTHER INFORMATION	<p>Spoken languages: English (proficient), French (mother tongue), German (basic)</p> <p>Citizenship: France</p> <p>Last updated: September 12, 2021</p>