

# NIKOLAOS IOANNIS BOUNTOS

 [GitHub profile](#)

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## EDUCATION

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<b>Orion Lab, National Technical University of Athens</b>	<i>2021-2025</i>
<i>PhD Candidate: Multimodal Representation Learning for Earth Observation</i>	
<b>Technical University of Munich</b>	<i>February 2020</i>
<i>MSc: Data Engineering and Analytics</i>	
<b>Aristotle University of Thessaloniki</b>	<i>September 2016</i>
<i>BSc: Computer Science</i>	

## WORK EXPERIENCE

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Position	Institute/Company	Time Period
Research Intern	<a href="#">Mila - Quebec AI Institute</a>	April 2023 - Nov. 2023
Beyond Fellow, Visiting Researcher	<a href="#">AI4EO Future Lab, TU Munich</a>	Sept. 2022 - Dec. 2022
AI Researcher/ PhD Candidate	<a href="#">Orion Lab - National Technical University of Athens</a>	Jan. 2021 - <b>Present</b>
Artificial Intelligence Engineer	<a href="#">Motius</a>	Dec. 2019 - Apr. 2020
Master Thesis on Computer Vision	<a href="#">Esri Deutschland</a>	Apr. 2019 - Sept. 2019
Working Student Data Analytics	<a href="#">KPIT</a>	July 2018 - Febr. 2019
Working Student Data Scientist	<a href="#">Trillr.com</a>	Oct. 2017 - Jan. 2018
Web Developer	<a href="#">Newte</a>	Dec. 2016 - Apr. 2017

## AWARDS/SCHOLARSHIPS

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- **Best Paper Award** at the **ICCV 2023 AI + HADR** workshop for our paper **TeleViT: Teleconnection-driven Transformers Improve Subseasonal to Seasonal Wildfire Forecasting**.
- **International Research Center on Artificial Intelligence** under the auspices of **UNESCO Global Top 100 list 2022-23** for the project: **Pluto - A global volcanic unrest early warning system**, rated as **Excellent**.
- **Beyond Fellow Scholarship** of the **AI4EO Future Lab** of the **Technical University of Munich**
- **European Union Agency for the Space Program - Cassini Challenge**: winner of the idea track

## PUBLICATIONS

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- [Kondylatos Spyros\\*](#), [Nikolaos Ioannis Bountos\\*](#), Michail Dimitrios, Zhu Xiao Xiang, Camps-Valls Gustau, Papoutsis Ioannis. "On the Generalization of Representation Uncertainty in Earth Observation." *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, 2025.
- [Nikolaos Ioannis Bountos\\*](#), [Maria Sdraka\\*](#), Angelos Zavras, Ilektra Karasante, Andreas Karavias, Themistocles Herekakis, Angeliki Thanasou, Dimitrios Michail, Ioannis Papoutsis. "Kuro Siwo: 33 billion  $m^2$  under the water. A global multi-temporal satellite dataset for rapid flood mapping." *Advances in Neural Information Processing Systems 37 (2025)*: 38105-38121.

- **Nikolaos Ioannis Bountos**, Arthur Ouaknine, Ioannis Papoutsis, and David Rolnick. "Fomo: Multi-modal, multi-scale and multi-task remote sensing foundation models for forest monitoring." Proceedings of the AAAI Conference on Artificial Intelligence. Vol. 39. No. 27. 2025.
- Wang, Yi, Zhitong Xiong, Chenying Liu, Adam J. Stewart, Thomas Dujardin, **Nikolaos Ioannis Bountos**, Angelos Zavras, Franziska Gerken, Ioannis Papoutsis, Laura Leal-Taix'e and Xiao Xiang Zhu. "Towards a Unified Copernicus Foundation Model for Earth Vision." Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV), 2025
- Spyros Kondylatos, **Nikolaos Ioannis Bountos**, Ioannis Prapas, Angelos Zavras, Gustau Camps-Valls, Ioannis Papoutsis. "Probabilistic Machine Learning for Noisy Labels in Earth Observation." arXiv preprint arXiv:2504.03478 (2025).
- Papadopoulos, Nikolas, **Nikolaos Ioannis Bountos**, Maria Sdraka, Andreas Karavias and Ioannis Papoutsis. "Hephaestus Minicubes: A Global, Multi-Modal Dataset for Volcanic Unrest Monitoring." (2025).
- Michail, D., Davalas, C., Panagiotou, L. I., Prapas, I., Kondylatos, S., **Bountos, N. I.**, & Papoutsis, I. (2025). FireCastNet: Earth-as-a-Graph for Seasonal Fire Prediction. arXiv preprint arXiv:2502.01550.
- Michail, D., Panagiotou, L. I., Davalas, C., Prapas, I., Kondylatos, S., **Bountos, N. I.**, & Papoutsis, I. (2024). Seasonal fire prediction using spatio-temporal deep neural networks. arXiv preprint arXiv:2404.06437.
- Papoutsis, Ioannis, **Bountos Nikolaos Ioannis**, Zavras Angelos, Michail Dimitrios, Tryfonopoulos Christos. "Benchmarking and scaling of deep learning models for land cover image classification." ISPRS Journal of Photogrammetry and Remote Sensing 195 (2023): 250-268.
- Prapas, Ioannis, **Nikolaos Ioannis Bountos**, Spyros Kondylatos, Dimitrios Michail, Gustau Camps-Valls and Ioannis Papoutsis. Prapas, Ioannis, et al. "Televit: Teleconnection-driven transformers improve subseasonal to seasonal wildfire forecasting." Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV) Workshops. 2023.
- **Nikolaos Ioannis Bountos**, Dimitrios Michail, and Ioannis Papoutsis. "Learning from Synthetic InSAR with Vision Transformers: The case of volcanic unrest detection." IEEE Transactions on Geoscience and Remote Sensing (2022).
- **Bountos, Nikolaos Ioannis**, Papoutsis, I., Michail, D., Karavias, A., Elias, P., & Parcharidis, I. (2022). "Hephaestus: A large scale multitask dataset towards InSAR understanding." Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) Workshops. 2022.
- **Nikolaos Ioannis Bountos**, Ioannis Papoutsis, Dimitrios Michail, Nantheera Anantrasirichai. "Self-supervised contrastive learning for volcanic unrest detection." IEEE Geoscience and Remote Sensing Letters 19 (2021): 1-5.

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<sup>\*\*</sup>First two authors contributed equally.