Juan Pablo Duque Ordoñez

3rd year PhD student in Environmental Engineering at Politecnico di Milano. Geoinformatics Engineer from Politecnico di Milano and Computer Scientist from Universidad del Norte, Colombia.

Programmer, researcher, and web developer. I have working experience in both development and leadership positions.

Contact Information
- Email: juanpablo.duque@polimi.it
- LinkedIn
- GitHub

EXPERIENCE

EBWorld, Italy: *Software Developer*

Jul 2021 - Nov 2022 (1 year 5 months)

– Full-stack web development of GIS-centric web applications using Angular, OpenLayers, and Node.js

Lokafy, remote: *Full-Stack Web Developer*

Jul 2020 - Aug 2021 (1 year 2 months)

– Full-stack web development in Django and Vue.js
– Backend team leader, managing up to 5 developers and taking system design decisions.

Binar10, Barranquilla: *Frontend Developer*

Dev 2018 - Aug 2019 (9 months)

– Frontend Web Developer in Angular 2+.
– Team leader for the development of the website of a local money-transfer company.

TEACHING

EDUCATION

Politecnico di Milano, Milano: *PhD student, Environmental Engineering*

Nov 2022 - Present

– PhD student in Environmental Engineering.
– My research is centered on Digital Twin Cities.
– Teaching assistant of the Geographic Information Systems class of 2023-2024, related to Web GIS.

Politecnico di Milano, Milano: *MSc, Geoinformatics Engineering*

Feb 2020 - Apr 2022

Final score: 109/110

LANGUAGES

Spanish – Native

English – Level C1
TOEFL iBT – Score: 102/120

Italian – Level B2
CELI3 B2

SKILLS

Programming: Python, Javascript, TypeScript, Java.

Web Technologies: Angular, Django, OpenLayers, Vue.

Software: QGIS, GeoServer, Apache, Docker, Office.

Operative Systems: Windows, Linux

Soft Skills: Leadership, adaptability, problem-solving, team management, academic writing.

– Graduated in April 2022 with a Master of Science in Geoinformatics Engineering.

– Thesis about implementing a web GIS for integrating multiple layers from several data sources using the mediator/wrapper architecture, as an approximation of a Digital Twin of the Italian coasts.

Universidad del Norte, Barranquilla: *Bachelor, Systems Engineering and Computer Science.*

Jan 2015 - Feb 2021

Final score:4.47/5

– Graduated with honors:
– Silver medal for best GPA in my cohort.
– University Merit medal.

PUBLICATIONS

Conference Paper: A standardised approach for serving environmental monitoring data compliant with OGC APIs

2024 – FOSS4G Europe 2024 Tartu

Published in: Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.

Duque, J. P., Pugliese, A. D. J., and Brovelli, M. A.: A standardised approach for serving environmental monitoring data compliant with OGC APIs, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-4/W12-2024, 51–58, https://doi.org/10.5194/isprs-archives-XLVIII-4-W12-2024-51-2024, 2024.

Conference Paper: System architecture for geospatial virtual data integration in web-based applications

2023 – Geospatial Week 2023 Cairo

Published in: Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci.

Duque, J. P. and Brovelli, M. A.: SYSTEM ARCHITECTURE FOR GEOSPATIAL VIRTUAL DATA INTEGRATION IN WEB-BASED APPLICATIONS, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-1/W2-2023, 939–944, https://doi.org/10.5194/isprs-archives-XLVIII-1-W2-2023-939-2023, 2023.

Conference Paper: Building a digital twin of the Italian coasts

2022 – FOSS4G Firenze

Published in: Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII

Duque, J. P. and Brovelli, M. A.: BUILDING A DIGITAL TWIN OF THE ITALIAN COASTS, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-4/W1-2022, 127–133, https://doi.org/10.5194/isprs-archives-XLVIII-4-W1-2022-127-2022, 2022.

Conference Paper: Comparison of Spatial Clustering Techniques for Location Privacy

J. P. D. Ordóñez, A. de Jesús Pugliese Viloria and P. W. Rojas, "Comparison of Spatial Clustering Techniques for Location Privacy," 2019 IEEE Latin-American Conference on Communications (LATINCOM), 2019, pp. 1–6, doi: 10.1109/LATINCOM48065.2019.8938006.