

Luigi Carboni

Senior Geospatial Analyst & Urban Planner | Teaching assistant | GIS Expert

About

Urban Planner and Geospatial Analyst with 6 years of experience in using GIS, data analysis and mapping to guide urban planning companies and public agencies to develop more sustainable and liveable cities. Achieved and contributed to 15+ multidisciplinary projects - both national and international - using geospatial tools and methodologies. Proficient in assessing urban, mobility, and transport dynamics and supporting decision-making and planning processes by managing, processing and visualising complex data. I have also been sharing my knowledge of GIS and urban planning as a teaching assistant and lecturer for the last 5 years.

Professional skills

- Urban Planning
- Mobility Planning
- GIS-Geospatial
- Spatial Analysis
- Location Intelligence
- Network analysis
- Data Visualization
- Mapping

Tools

- QGIS / ArcGIS (Model builder, Automated Workflows, SQL, Advanced expression, 3D)
- ArcGIS Online (WebMap/ Dashboard/ StoryMap)
- Python (Pandas, Geopandas, OSMnx, Matplotlib)
- MS Office
- Tableau
- Adobe (Ai, Ps, Id)
- AutoCAD

Professional Experiences

Senior Consultant

2024 - present

MIC-HUB, Milan (IT)

- Leading projects and team activities related to mobility, transport planning and masterplanning.
- Coordinating the project processes from data acquisition to delivery/communication to clients through presentations/reports.
- Demonstrated advanced proficiency using Geospatial tools, handling, and processing complex spatial and statistical data.
- Utilizing spatial analysis, interactive visualizations, and thematic maps to guide mobility planning projects and masterplans.

Senior Urban Planner & Geospatial Analyst

2022 - 2024

One Works, Milan (IT)

- Leading projects and team activities related to urban and mobility planning, spatial data analysis, mapping, and economics.
- Coordinating the GIS processes from data acquisition to delivery/communication to clients through presentations and reports.
- Demonstrated advanced proficiency using Geospatial tools, handling, and processing complex spatial and statistical data.
- Utilizing spatial analysis, interactive visualizations, and thematic maps to guide urban planning projects and masterplans.

Research Fellow in GIS-Geospatial analysis

2019 - 2023

Politecnico di Milano, Milan (IT)

- Developed spatial and statistical analysis to drive urban and mobility projects with reference to socio-demographic, economic, mobility, transports, and environmental phenomena.
- Created synthetic indicators and GIS methodologies, replicable in different contexts, with automated models in SQL and Python
- Demonstrated proficiency in GIS location intelligence and geospatial tools: network analysis (*isochrones, location-allocation, directions, O/D matrix*), and advanced geo-processing (*hotspots/zonal statistics, heatmaps, temporal analysis*).
- Reported and presented results to local/international partners and stakeholders (PA, Mobility and Transportation Agencies, Private Companies) using thematic maps, interactive web maps, and data visualizations (Dashboards, Web Maps/Apps).

GIS Analyst & Research Collaborator

2018 - 2019

Politecnico di Milano, Milan (IT)

- Applied GIS methodologies and technologies to assess diversity, accessibility, proximity levels in urban and territorial contexts.
- Performed advanced spatial analysis in consolidated urban contexts (e.g. Milan) and informal areas with poor data availability (e.g. Rocinha, Brazil) using QGIS and ArcGIS geoprocessing tools (*Network analyst, UNAtool Betweenness, Heatmaps*).
- Collected and maintained conventional/open DB and input new spatial data via geocoding, georeferencing, and editing in GIS.
- Worked with academics/professionals to deliver technical reports with thematic maps and data visualizations to stakeholders.

Transport and mobility planning intern

2017

Systematica, Milan (IT)

- Contributed to international projects and masterplans in mobility and transport planning.
- Elaborated data, produced maps and schemes shared with co-workers/team for reporting to clients and partners.

Education

Post-graduate Advanced Traineeship in Geographic Information Systems GIS, Politecnico di Milano, 2018

MSc in Urban Planning and Policy Design, Politecnico di Milano, 2018 (final grade 110/110)

BSc in Urban, Territorial, Environmental and Landscape Planning, University of Sassari, 2015

Erasmus E.U. Student Exchange Programme, Istanbul Technical University, 2013-2014

Other Experiences

Lecturer & Teaching Assistant in GIS-Urban Planning

2019 - 2024

Politecnico di Milano, Milan (IT)

- 2023-21-20 Master II livello "Design for Development - Architecture, Urban Planning and Heritage in the Global South", Poliedra
- 2021 "Gis open source nei paesi in via di sviluppo – corso di introduzione a Qgis", Fondazione Avsi, MaudLab
- 2023- 2024 MSc: "Environmental Analysis and Landscape Mapping", School AUIC, Milano
- 2022- 2023 MSc: "Environmental Analysis and Landscape Mapping", School AUIC, Milano
- 2021- 2022 MSc: "Infrastructures Design", Scuola di Architettura e Studi Urbani (DASTU), Milano
- 2021- 2022 MSc: "Design for public spaces and infrastructures", School of Sustainable Architecture and Landscape Design,
- 2021- 2022 MSc: "Environmental Analysis and Landscape Mapping", School AUIC, Milano
- 2020- 2021 MSc: "Design for public spaces and infrastructures", School of Sustainable Architecture and Landscape Design
- 2020- 2021 MSc: "Spatial Planning and Infrastructure Design Studio", Scuola di Architettura e Studi Urbani (DASTU).
- 2020- 2021 MSc: "Environmental Analysis and Landscape Mapping", School AUIC.
- 2020- 2021 MSc: "Architecture for Smart City", School of Architecture Urban Planning Construction Engineering (AUIC).
- 2020- 2021 BSc: "Economia del Territorio", Scuola di Architettura e Studi Urbani (DASTU).
- 2019- 2020 MSc: "Environmental Analysis and Landscape Mapping", School AUIC

Award

Best Poster. "The geography of ageing accessibility in Italy". Carboni L., Rossi F. M., Akhavan M., AISRE 2020.

Selected Conference

- An Inclusive Accessibility by Proximity Index for a fairer city, T2M 20th Annual Conference 2022.
- Verso una post car mobility. Sperimentazione di un indice di accessibilità di prossimità per una città più equa, SIU 2022.
- Mapping accessibility in Milan. CITY+ International Conference, 2021.
- Mapping cycle routes with Openrouteservice, State of The Map SOTM, 2021.
- Night activities in Milan: an exploration through mobile phone data, ICNS.LX International Conference 2021
- Mapping the gradients of peripherality, data and representations, Milano Digital Week 2020.

Relevant Publication

- Measuring accessibility by proximity for an inclusive city, Lanza G., Pucci P., Carboni L., Cities 2023
- Accessibility by proximity in a mountain area, Pucci P., Carboni L., Lanza G., ASUR, 2021.
- Accessibility by proximity index for a fairer city. Pucci P., Carboni L., Lanza G., Territorio n.99 2021.
- Periferie del cambiamento. Cognetti F., Gambino D., Larena Faccini J., Quodlibet, 2020. Contributo al capitolo: Milano Periferie – Mappare I gradienti di perifericità, p. 138-147. Carboni L., Manfredini F.

Certifications

Going Places with Spatial Analysis, Esri | 2023

Spatial Data Science, Esri | 2022

Mapping and Data Visualisation with Python, Spatial Thoughts | 2022

Python Foundation for Spatial Analysis, Spatial Thoughts | 2022

Advanced QGIS, Spatial Thoughts | 2022

Python Programming for Data Visualisation and Analysis, Planetizen | 2022

GIS Walkability Modelling, Planetizen | 2022

ArcGIS Online, Esri Italia | 2021

Tableau Desktop Fundamentals and Advanced, EcohMedia | 2021

Languages

Italian (mother tongue), **English** (professional working proficiency), **Portuguese** (level A2/B1)

IELTS Certificates, Bellerbys College, Brighton, UK - Score: writing 6.5, reading 6.5, listening 6.5, speaking 7 | 2015

English College, British Study Centres, Brighton, UK | 2015