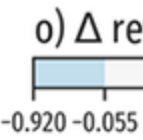
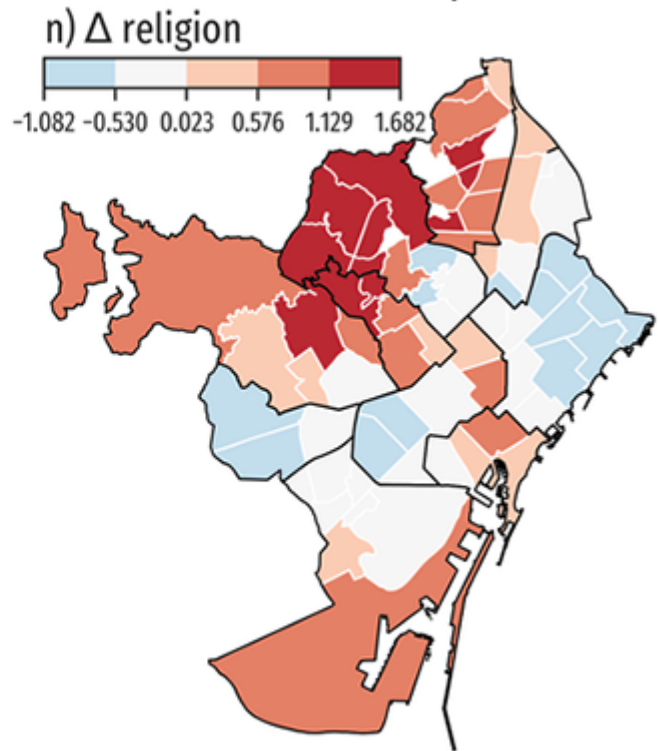
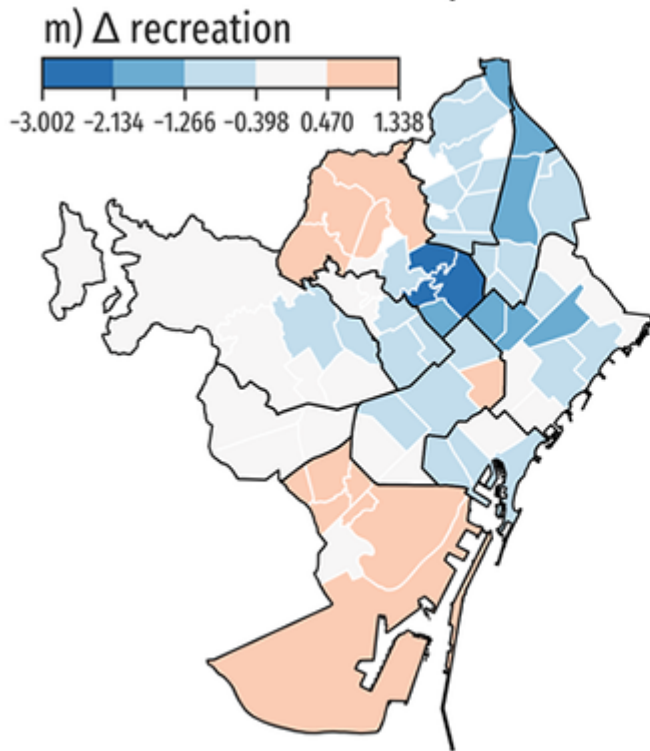
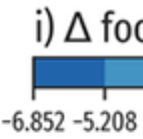
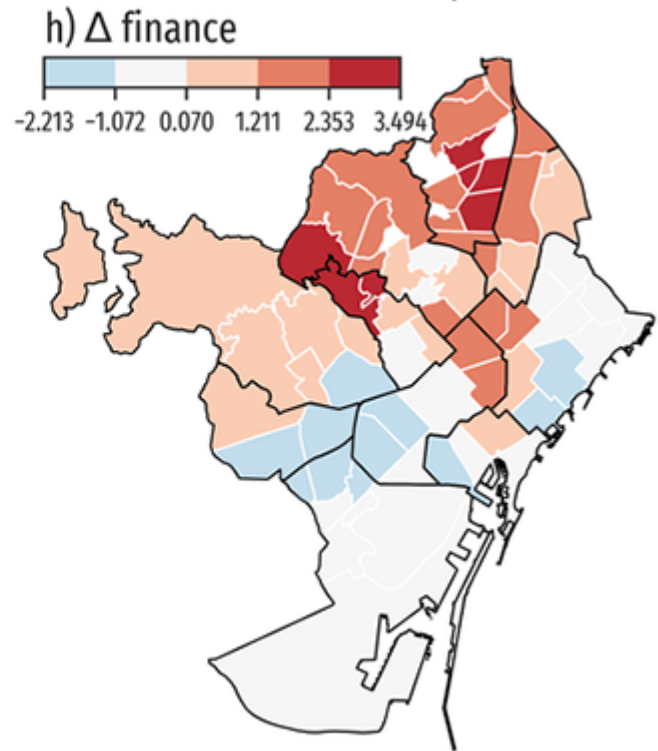
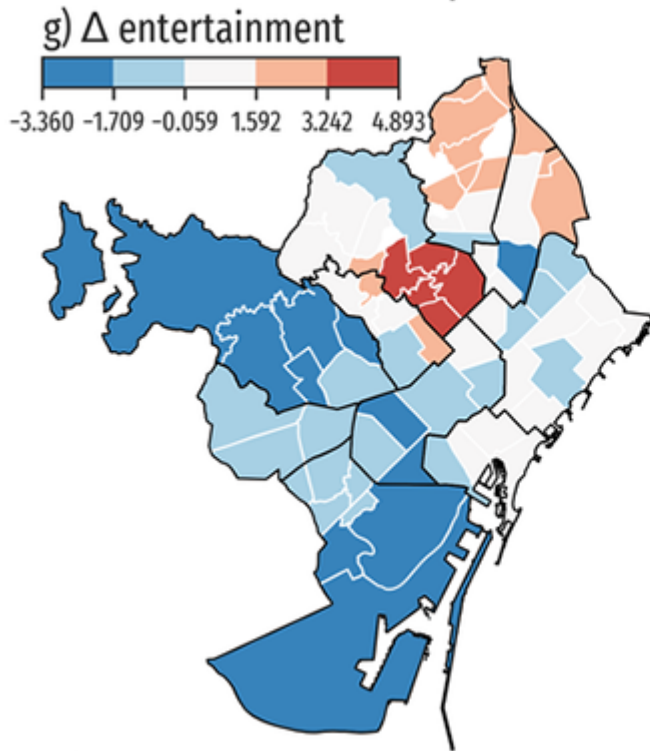


Urban Data Science



Cities are projected to absorb more than two-thirds of the growth in global population. Making cities

inclusive, safe, resilient, and sustainable has thus become a global priority. In our team, we use data to study the interactions that occur in cities: between their residents and with their environment.

Summary

Life in today's cities is characterised by a constantly evolving diversity of activities and people. We are interested in the study of these urban dynamics, like in the case of **housing dynamics**, with phenomena such as **gentrification** and its impact on **housing affordability**.

We use AI methods to study and explain the behaviour of urban dynamics. Our expertise in **High Performance Computing** enable us to develop **scalable solutions** that are adapted to the typology and size of each city.

We analyse **urban mobility** to identify and explain mobility patterns, helping policy-makers plan better cities. We simulate travels, through methodologies such as agent-based models, in order to evaluate mobility scenarios.

We also study the **accessibility** to services and urban infrastructure, taking into account the diversity of the population, according to their needs and profile.

We believe that research must reach back to society. In the team we help citizens understand the behaviour of their city. Thanks to our large expertise on Visualisation, 3D rendering, UI/UX design, we create **videos, dashboards, websites and infographics** to disseminate our research results.

Objectives

- Influence urban regulations aimed at improving life in cities.
- Help policymakers make evidence-based human-centred urban decisions.
- Help citizens interact with their city by proposing human-centred interventions that improve the quality of life, while respecting individual privacy and ethical principles.

Barcelona Supercomputing Center - Centro Nacional de Supercomputación

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