

unLoc - Exploring the Synergy of Human and Machine Creativity in Architecture. Redesigning Urban Space through Machine Learning, Artistic Expression, and Community Collaboration.

Project summary

The unLoc project is inspired by the concept of "locus of control" as a metaphor for the symbolism of the architecture of power and how it reflects the history of power relations manifested in public space planning. The project focuses on post-communist architecture in the former Eastern Bloc, examining the influence of post-Soviet architecture on cities' spatial conditions. The project aims to explore the adequacy of functionalities of this type of buildings to the needs of contemporary residents, the sufficiency of new functions to residents' needs, possible strategies of transformations of those buildings to sustainable, ecological, and inclusive architecture, and transforming a "vertical" approach to designing urban architecture which reflects the class divisions in society into a "horizontal" approach that focuses on accessibility and empowerment of citizens in shaping urban spaces.

The project aims to use machine learning algorithms to create alternative visions of urban spaces that are responsive to the needs of city residents. This approach aligns with recent urban planning literature and emphasizes the potential of digital tools to make planning processes participatory and inclusive.

The project has five main objectives:

1. To redesign cities and buildings with a difficult history. By using post-communist architecture as an exemplary manifestation of the architecture of power, the project aims to explore the potential possibilities for redefining their form and meaning during the research. The project aims to undertake the process of reversing the mechanisms of power used to create these objects and places.
2. To explore the issue of democratic access to technological solutions and the use of these solutions by communities and groups of residents. The project aims to test the extent to which neural networks can support citizens in debates about public space and help visualize the needs of residents. By doing so, the project hopes to encourage engagement in dialogue with city authorities and promote the presentation of innovative solutions and proposals.
3. To explore the possibilities of combining neural networks with user creativity. The project aims to determine where algorithms enhance creativity and where they limit it. The project will create a neural network to evaluate and value the entire creation process.
4. To engage with the resident community and partner with civic associations to gain knowledge on cooperation mechanisms, exchange information, by using adequate research methods, such as social feedback and participatory action research.
5. To transform the grey postcommunist city environment to a sustainable and green one, requiring solutions that meet local communities' expectations and provide basic needs of residents related to their daily functioning, thus reducing the carbon footprint. Machine learning and creative activities with citizens and stakeholders will identify, visualize and evaluate such solutions.

The interdisciplinary approach in the project research is crucial to achieving goals. Internal dependencies among planned research methods shall increase creativity and redesign ability. The conceptual approaches combine theoretical analysis, case study research, design and modeling, algorithmic and generative design, participatory and co-design research. The UnLoc project aims to promote inclusivity, participation, and democratization of architecture and urban planning through the use of technology and innovative approaches.