

Isabella Bolaños '24

Major: Architecture

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Growing up in El Salvador and traveling throughout Central America, I became fascinated by how built environments evolve in response to cultural and environmental forces. This curiosity led me to explore architecture as a powerful medium for cultural expression, social engagement, and transformation.

As cities grow and densify, they develop complex social, economic, and environmental challenges, such as the urban heat island effect, where heat-absorbing surfaces contribute to rising temperatures. However, cities also have the capacity to adapt and reshape in response to these challenges, which is a concept I refer to as "malleable growth".

My project investigates how prefabricated modular structures can introduce greenery into dense urban spaces. Drawing inspiration from fire escape attachment systems, the design of the platforms incorporates tessellating shapes, reflecting the malleable growth inherent in cities. To ensure functionality, I developed an automated irrigation system to address urban heat while minimizing maintenance challenges. Additionally, integrated solar panels provide lighting solutions for areas with limited natural light. This project offers a scalable, efficient strategy for cooling cities and reintroducing vegetation into the built environment.