







### **Netzero Transportation Infrastructure**

**Undergraduate Research Opportunities** 

# **Project Goals**

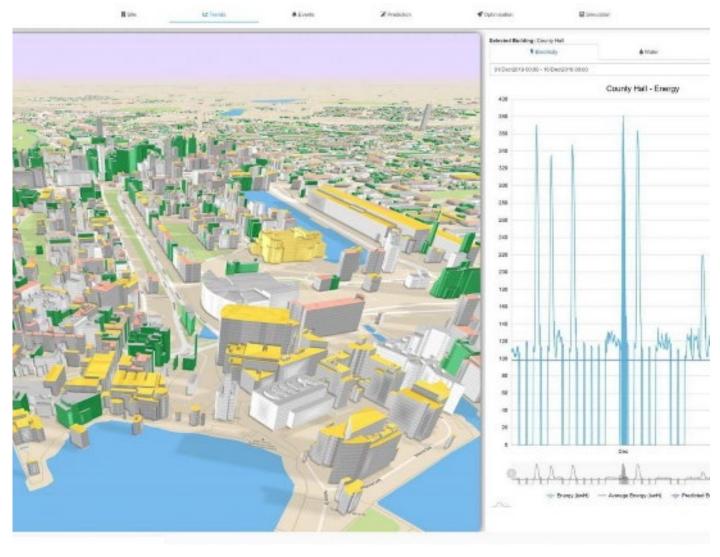
- Fight Climate Change
- Help Build Resiliency
- Support Transition to Net Zero
- Help Adoption of Green Energy and Infrastructure

#### Research

- Model and Measure Impact of Green Technologies
- Help Plan Adoption of Green Technologies
- Examples:
  - Transportation Electrification
  - Emissions
  - Energy Consumption

## **Project: Technical Details**

- Adapt Existing code to Chicago/UIC
- Digital Twin Framework
- Visualize Data Sources on a Map
- Interact with Map Elements
- Model City Elements
- Simulate Scenarios
- Data and Sensor Security



# **Skills Requirements**

- Javascript
- Web Languages (HTML, CSS)
- Programming Languages (Python, Java)
- Systems Knowledge
- Modeling tools and languages (Autodesk, Matlab, R)
- Knowledge about data security

## Responsibilities

- Students will be paired with faculty from different institutions
  - UIC, UIUC, Cardiff
- Participation in research projects related to Net zero
- Participate in meetings
- Write code to read, ingest, and visualize data
- Write code to simulate different scenarios with synthetic data
- Write reports and participate in writing scientific papers
- Duration: January June 2022

#### **Contacts**

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