

# SREYA TOLETY

LEED AP (BD+C)

Sustainability & Computation

## CONTACT

(412) 897-2256

stolety@andrew.cmu.edu

LinkedIn: [Sreya Tolety](#)

[designbysreya.com](#)



## PROFILE

Sreya Tolety is interested in the dichotomy between energy efficiency and human comfort in the built environment that affects performance and wellness. She confronts this via computational evaluation, data-informed parametric simulation, and generative design tools.

## EDUCATION

M.S in SUSTAINABLE DESIGN  
CARNEGIE MELLON UNIVERSITY  
2019 - 2021

B. ARCHITECTURE  
VISVESVARAYA TECHNOLOGICAL UNIVERSITY  
2013-2018

## PROFESSIONAL EXPERIENCE

### BUILDING PERFORMANCE INTERN

Interface Engineering / Washington, DC / May 2020 - August 2020

- Facilitated energy analysis and modelled HVAC systems for the upcoming Amazon HQ2 campus in LEED Platinum certified Arlington County in Virginia.
- Built Grasshopper pipelines and GH-Python scripts to allow of building-level solar energy analysis, simulation and net metering, wind flow patterns in the early-stage design process of long-term, large-scale architectural projects.

### GRADUATE RESEARCH ASSISTANT

Manufacturing Futures Initiative / Pittsburgh, PA / Feb 2020 - May 2020

- Material science & robotics research at CMU College of Engineering's MFI in jet binding, structural integrity for additive manufacturing and fabrication of construction blocks using demolition waste as aggregate in partnership with ExOne, a leader in global manufacturing.

### GRADUATE TEACHING ASSISTANT

Carnegie Mellon University / Pittsburgh, PA / Jan 2020 - Present

- Introduced computational tools pertaining to energy analysis such as Climate Studio, DIVA, Energy Plus and ArchSim on Grasshopper-Rhino to graduate students during the Advanced Construction Studio. Implemented computational techniques to help with the iterative design process.
- Assisted Professor Omer Karaguzel in the Building Physics course concerned with environment-based simulation with thermal and daylighting performance on Grasshopper using the plugin, Climate Studio.
- Assisted Professors Dana Cupkova and Eddy Man Kim in conducting design computation and visual scripting workshops for the Environment, Form and Feedback studio.

## COURSES

Scripting & Parametric Design: Information-based parametric modeling and genetic optimization using GH Python on Rhino integrated into the design process.

Fundamentals of Programming & Computer Science: Developed Carbo, Creditor, a Python tool that credits and analyses for individual level carbon-footprint and sustainability.

Building Performance Modeling: Computational modeling of HVAC, energy systems & exterior factors relevant to building-level performance to inform design.

Environmental Performance Simulation: Worked on climatically responsive, performance-based simulation to support decision-making in the urban built environment.

Dynamic Actuation of High-Performance Facades: Developed generative, climate-controlled façade configuration to influence higher standards of human thermal comfort.

Shaping Daylight: Building a virtual/augmented reality construction engine on Grasshopper-Unity Engine to analyze the qualitative and quantitative components of daylighting.

Generative Modelling: Worked to develop advanced computational design methods on the basis of Grasshopper scripting.

## SKILLSET

### SOFTWARE

- Rhinoceros
- Grasshopper
- Dynamo
- Revit
- Fusion 360
- Adobe Suite
- Unity 3D
- SimaPro
- Robot Studio

### LANGUAGES

- Python
- C++
- Processing

### SIMULATION

- Energy Plus
- Green Building Studio
- Ladybug
- DIVA
- Climate Studio
- Honeybee
- ArchSim
- Design Builder
- Cove tool
- Helioscope
- ArcGIS
- IES-VE