Sriya Gayathri Thotakura
Computational Designer & Architect

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Computational Designer and Architect pursuing an M.S. in Computational Design Practices at Columbia University Graduate School of Architecture (GSAPP), specializing in mathematical modeling, interactive data visualization, and human-centered AI workflows for design innovation.

Education ───

M.S. in Computational Design Practices | New York, NY | 2025–2026
Columbia University | Graduate School of Architecture, Planning and Preservation (GSAPP)

Bachelor of Architecture (5-Year Professional Degree) | Hyderabad, India | 2019–2024
Jawaharlal Nehru Architecture and Fine Arts University, GPA: 3.6/4.0
- Served as President and Founding Member of the College Journalism Club, mentoring editorial teams and translating complex architectural theory into accessible publications.
- Led students in conceptual design development for national architecture competitions
- Led cultural programming as Cultural & Art Club lead, designing instructional briefs for college fests, organizing heritage walks and peer engagement initiatives.

St. Andrews School — Hyderabad, India | 2017–2019
Higher Secondary Education — Science Stream

Work Experience ───

LAD 360 — Junior Architect | Hyderabad, India | Apr–May 2025
- Led interior architecture development for high-end gated residential and commercial projects, aligning design intent with client expectations and site constraints.
- Directed on-site supervision, documentation, and as-built updates to ensure construction accuracy
- Owned material costing and procurement through detailed BOQ analysis

Studio PKA — Architectural Intern | Mumbai, India | Jul–Dec 2023
- Enhanced adaptive reuse and corporate projects, including a World Architecture Festival'23 nominated project.
- Developed 3D models and high-fidelity renders using Enscape for client approvals and HVAC/electrical integration layouts.
- Drove engagement sessions between architects, artists, and students to encourage collaborative exchange.

Freelance Design Consultant | Various Locations, India | 2019–2024
- Designed and optimized residential projects (up to 7,000 sq. ft.) using iterative 3D prototyping and computational layout modeling.

Technical Skills ──

Computational Design & BIM:

Rhino, Grasshopper (Algorithmic Modeling), Revit (BIM), Blender, Digital Fabrication (CNC / Laser)

Programming & Data Visualization:
Python (Data Analysis, Agent-Based Modeling), JavaScript, D3.js, Three.js, React, HTML, Tailwind CSS

Generative AI & Machine Learning:
Stable Diffusion (ControlNet, ComfyUI), Claude, NotebookLM, Midjourney, Gemini Veo

Spatial Analysis & Mapping:
Climate Modelling, QGIS, GIS workflows, Photogrammetry, Information Architecture, Microsoft Excel

Design & Visualization:
Figma, Adobe Creative Suite (Photoshop, Illustrator, InDesign), Enscape, V-Ray

Research & Academic Work —————————————————————————————————

Feral Atlas: Environmental Inequality & Regulatory Spillovers | GSAPP | 2025–Present
- Developed a multi-layer interactive visualization platform mapping community interventions and regulatory spillovers related to urban flooding, air quality, and biodiversity.
- Applied agent-based modeling (ABM) to simulate emergent environmental inequalities and their effects on diverse land-use factors.
- Designed a low-tech API infrastructure by perma computing principles using cronjob-based "reluctant" mathematical modeling for long-term sustainability.

Regulatory Spillover Analysis — South Bronx Case Study | GSAPP | 2025
- Quantified correlations between truck-route interventions and elevated asthma rates in the South Bronx, proving it as a "40% grey city."
- Mapped residential land use against industrial spillover to identify priority zones for urban canopy and air-quality interventions.

Academic Thesis — Mumbai Social Housing | 2024
- Developed an urban-scale 15-minute city model on adaptive reuse of abandoned mill lands.
- Authored research on sustainable retail systems and adaptive reuse strategies.

Observation & Action Network (OAN) Grant Program | 2021
- Collaborated with NGOs to document and design educational spaces in informal settlements.
- Assessed spatial needs for early childhood education centers.

Hackathons & Workshops —————————————————————————————————

- Participated in the **LEAP Pangeo Hackathon** (2026), developing data-driven strategies for urban climate resilience in NYC.
- Completed **The Pudding Data Visualization Workshop** (2025), applying narrative-driven and interactive data storytelling techniques.
- Attended **design workshops at CEPT University** (2021), exploring experimental visual and analog design processes.
- Selected for the **Design Festival Mentorship Program** (2021), exploring design principles and illustration development
- Participated in the **ANC NASA Seminar** (2022), focused on cartography and spatial problem-solving in urban contexts.