

Sanjay Kumar V

Computational Designer(Generative design, Agentic AI,Plugins,Automations)

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1. About

An enthusiast at the intersection of design and intelligence, I recently graduated with a Master's in City & Technology from IAAC Barcelona, where I was honored with the "Advanced Urban Computation Excellence" award for the batch and served on the IAAC research team. With a Bachelor's in Architecture and over 4+ years of experience in computational design and AI, I develop advanced computational design technologies for complex urban systems and the built environment. My passion lies in transforming raw data into design intelligence by generating, extracting, collecting, and articulating insights that drive innovative, multidisciplinary solutions and multitech stacked automation workflows.

2. Interests

URBAN AI | Geospatial Data science | Data-driven design | Design intelligence | Responsive AI | Agentic AI | Generative design | Automation | Computational design

3. Education

IAAC – Barcelona, Spain | Master's in City and Technology | Oct 2024 - July 2025

Global Earth Imagery Data Collection and Analysis, Agentic AI, Rag, Building as Graph

Hope Artificial Intelligence | Coimbatore | Aug 2021 - Feb 2022

Data science - Advanced machine learning - deep learning -Project-based learning

School of Architecture and Planning | Chennai | May 2016 - August 2021

Bachelor of architecture - Computation design

4. Skills

Programming Python | Jupyter notebook | Google collab | Anaconda | n8n | comfyui | git

Mapping Q Gis | Google Earth Engine | Xarray | GEE | Meshroom | Mapbox | Leaflet

Modeling Rhino | Grasshopper | Revit | Rhino.compute | Rhino script syntax | Rhino common

Machine learning: Sklearn, Tensorflow, Roboflow, YOLO.

Energy optimization Ladybug | Honeybee

Design Figma | Adobe Illustrator | Adobe photoshop | Adobe indesign | Miro

Web Development Bubble.io | WordPress | Scorelly telling | Github pages

5. Experience

Computational Researcher

Hakken

Dubai | United Arab Emirates

August 2022 - July 2023

Member of the Research team in digital innovation and frameworks.

Digital Automation and Research on various scales, from building scale to urban level.

Worked with algorithmic script development for the "Guided generative framework of office plan layouts with end-to-end design deliverables, such as generating various layouts, early stage design, Environmental energy simulations to production drawings with a human in the loop throughout the process.

Worked with a 5 sq km stretch of the master plan for giving spatial data analytics insights for better, smarter decision making.

Research Assistant in Satellite Imagery-based Crop Monitoring

Spain, Barcelona (Jan 2025)

IAAC Recitying – Land + Art

"Assisted in crop monitoring and documentation of various plantations cultivated for the installation site, utilizing agricultural by-products to enhance sustainability and integration."

Freelance Computational designer

Super Design Osaühing

Germany | (Remote)

Feb 2020 - Aug 2020

Shapediver consultation

Automation of global designers' furniture designs into fabrication with accurate precision for CNC milling design, which data can be fed directly into machines connected globally through the digital platform

Organized and labeled workflow identification

Computational designer

Smartplan.ai

Australia (Remote)

April 2021 - October 2021

Managed a team of three computational designers

Exploited different workflows of collaboration methods of communication using digital mediums

Exploited Evolutionary solver using optimizers such as octopus, galapagos, biomorph, and wallacei

Worked on creating a Generator for office planning layout

Created reusable and adaptable room libraries of plans

Worked to create Reports out of the created layouts

Evaluating and defining the fitness value for the generative

Computational designer

Within Associates

Chennai | India

April 2019

Part of the design team in the initial design phase for the Lexus car showroom interior

Digital modeling inspired by natural patterns

Worked on the creation of automation and labeling of fabrication drawings for the scaled model

Worked with lighting simulation and reflection

Architecture Internship

Mindspace Architects Associates,

Bangalore | India

Aug 2019 - March 2020

Worked with multiple large-scale schools and colleges.

Worked on Architectural drawings

Structural and design consultants discussion

Part of the Initial design discussion for large-scale projects.

6.Awards/Recognitions

IAAC

Advanced Urban Computation Excellence Award

INSDAG(A competition for innovative steel buildings)

National level finalist

7. Languages

Tamil (Native)

English (Fluent)

Spanish (Beginner)