

Yankun Yang

yangyankun.work@gmail.com | github.com/simpleSketches | [linkedin.com/in.yankun-yang/](https://www.linkedin.com/in/yankun-yang/) | <https://simplesketches.nyc>

Skills

- **Programming Languages:** Typescript, Javascript, Python, C#, HTML, CSS, Shader, GSAP
 - **Frameworks/Libraries:** React, Vue, [.net](#), Zustand, Pytorch, Three.js, R3f, FastAPI, [Node.js](#)
 - **CAD:** Blender, Rhino, Rhinocommon, Grasshopper, Revit, Revit API
-

Experience

Contract Software Engineer | Creative developer

Various Clients | 2017.12 - present

- Notable clients include Google, Mount Sinai, Higharc, xFigura, Cottage, Parametric Monkey, OutOfArchitecture and Minus Design Labs. Developed creative websites, BIM automation tools, and fullstack web platforms for various clients,
- Designed and developed creative websites, interactive digital experiences, BIM automation tools, 3D applications, and fullstack web platforms tailored to each client's business, operational, and user experience needs. Led projects from early concept and technical planning through prototyping, implementation, testing, and production deployment.

Lead Software Engineer

Hedral | 2025.02 - 2025.09

- Owned and delivered the core production platform for a construction focused structural automation product.
- Designed and built a performant 3D web configurator capable of rendering and interacting with millions of mesh faces at 60 FPS using instancing, custom shaders, LoD, and frustum culling.
- Designed a component driven architecture with reusable 2D, 3D, and UI React components. Published components as internal NPM packages via AWS Artifacts for consistent styling and rapid development across web and Electron POC applications.
- Defined the initial real estate developer facing MVP roadmap, led biweekly sprints, and established coding standards and best practices to ensure code quality, scalability, and development velocity.
- Mentored four junior engineers through weekly technical check ins, reinforcing best practices, accelerating skill development, and fostering knowledge sharing across the team.

Software Engineer

HOK | 2023 - 2025

- Led frontend development and implemented an NPM based micro frontends architecture for rapid iteration and deployment of SPAs for architectural and structural projects.

- Accelerated product delivery timelines and ensured code qualities by spearheading cross team collaboration enhancements on GitHub and optimizing CI/CD processes.
- Leveraged Elasticsearch in .net(C#) for efficient full text search and analytics, optimized indexing for rapid data retrieval, and designed queries to support complex filtering and aggregation needs.
- Developed a machine learning pipeline to automate from BIM (Revit) data extraction to model training, delivering a GNN-based spatial classifier proof of concept.

Senior Computational Designer

Thornton Tomasetti CORE Studio | 2021 - 2023

- Led the implementation of IoC and MVVM patterns for a tool distribution desktop application to enable faster development, greater modularity, and improved testability. Enabled hundreds of firm wide structural engineers across US and international offices to engage with CORE tools.
- Led the development of a .NET(C#) desktop application for real-time 2D / 3D data visualization, enabling users to assess structural design changes directly and reducing redundancy in the workflows across teams.

Geometry computational designer | Researcher

IBuilt | 2020 - 2021

- Inspired by Graph Grammar and Tree structure, designed and developed a prefabricated modular building generator in Python to enable instant creation of site-specific designs optimized for proforma and zoning constraints.
- Designed and developed backend endpoints in Flask to expose the generated results to the frontend team.
- Developed a debugging workflow to rapidly test generated results in Grasshopper using custom interfaces that mirror the frontend design.
- Rapid prototyping of generative geometry designs in Grasshopper that solve complex spatial problems in built environments.
- Designed and implemented unit tests to validate pre-deployed new API features, ensure the quality in the production environment.

Education

- **Columbia University**, Master's, M.Arch, 2019 - 2020 (advanced degree)
- **Pratt Institute**, Bachelor's, B.Arch, 2014 - 2019 (professional bachelor degree)