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Technical deep dive

FROM 2D FLOOR PLAN TO 3D MODEL

AI conversion

Master prompt · variables · vertical time-lapse



The step: from line to volume



...the inhabited model that results

Workflow goals

The procedure converts a 2D floor plan into an inhabited, detailed and photorealistic three-dimensional architectural model. The goal is to overcome the limits of traditional renderings and obtain presentations with strong emotional impact without altering in any way the original geometry of the technical project.

The principle that underpins everything

The 2D floor plan is not a suggestion: it is the inviolable spatial anchor. Walls, openings and proportions remain those of the technical drawing; the AI adds volume, materials, light and life, it does not redraw the house.



A miniature model, inhabited and lit

1 · The geometric base

The starting point is a clean black-and-white image of the floor plan. Everything depends on it: if the base is ambiguous, the AI invents.

[BASE REQUIREMENTS]

Clean line work, black and white

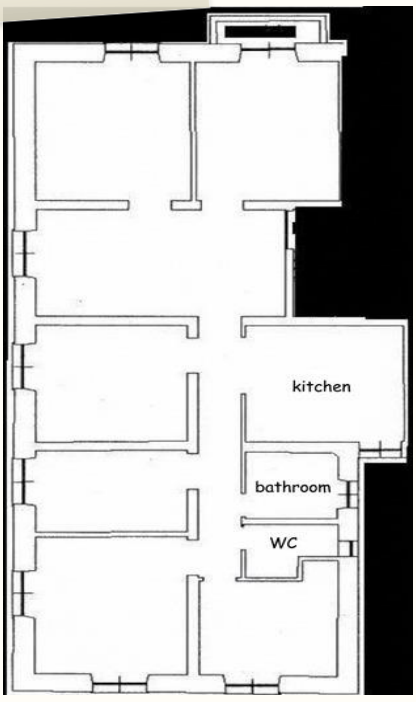
No shading, no hatching: only sharp, continuous wall lines. Sharp contrasts are what the model reads as load-bearing structure.

Labeled rooms

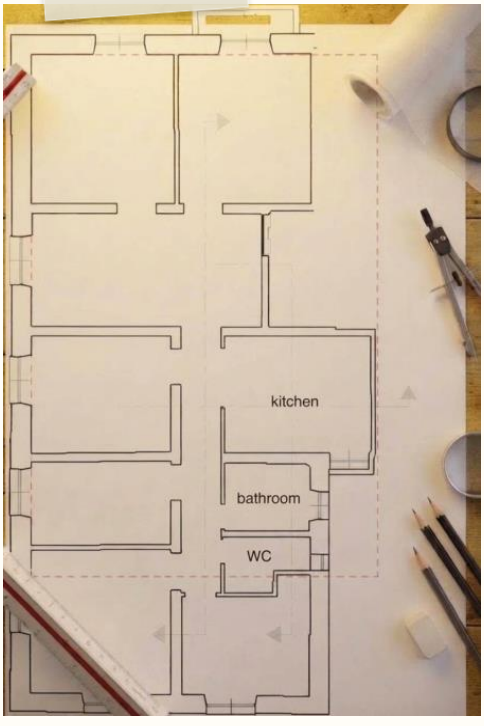
The labels kitchen, bathroom, wc, bedroom written on the floor plan guide the furnishing into the right room: without them the furniture ends up at random.

Drafting-table context

Rulers, pencils, compass and tracing paper around the sheet help the model interpret the scene as a physical miniature model, not as an interior photograph.



The raw base



The base: a clean 2D floor plan

2 · The master prompt

Structure rewritten and optimized, in English

The first two sentences must not be touched: they bind the AI to the floor plan provided. The rest can be customized.

An architectural 3D layout generated strictly over the provided 2D floor plan source. The underlying 2D blueprint remains geometrically unmodified, acting as the exact spatial master. Miniature inhabitable spaces rise vertically across the drafting desk surface. {ROOM_1} materializes with {FURNITURE_1} while {ACTIVITY_1} takes place; {ROOM_2} develops featuring {DESIGN_ELEMENT} alongside {HUMAN_MOMENT}; {ROOM_3} expands with {DETAIL_1} and {LIGHTING_1}. Partition walls precisely match the original blueprint traces. Hidden infrastructural pathways such as plumbing and electrical routing pulsate subtly beneath. Ghosted traces indicate human movement flow throughout. Professional architectural scale models populate the scene. Warm studio illumination, photorealistic 8K detail, architectural masterwork.

[WHY IT WORKS]

Three explicit constraints do the work: strictly over the provided source anchors the result to the image, geometrically unmodified forbids reinterpreting the walls, partition walls precisely match closes the door to shifting partitions.

Without these constraints, the AI draws a different house.

3 · The variables

Replace the placeholders in curly braces with the real project data. The more specific they are, the more the model resembles what you have in mind.

{BUILDING_TYPE}

Building type — contemporary family home, industrial loft, villa, city apartment.

{ROOM_1} · {ROOM_2} · {ROOM_3}

Specific names of the rooms — master bedroom, open-plan kitchen, home office. Use the same names written on the floor plan.

{FURNITURE_1} · {DESIGN_ELEMENT} · {DETAIL_1}

Furniture, finishes and design details: curved sofa, veined marble wall, full-height bookcase, copper hood.

{ACTIVITY_1} · {HUMAN_MOMENT} · {LIGHTING_1}

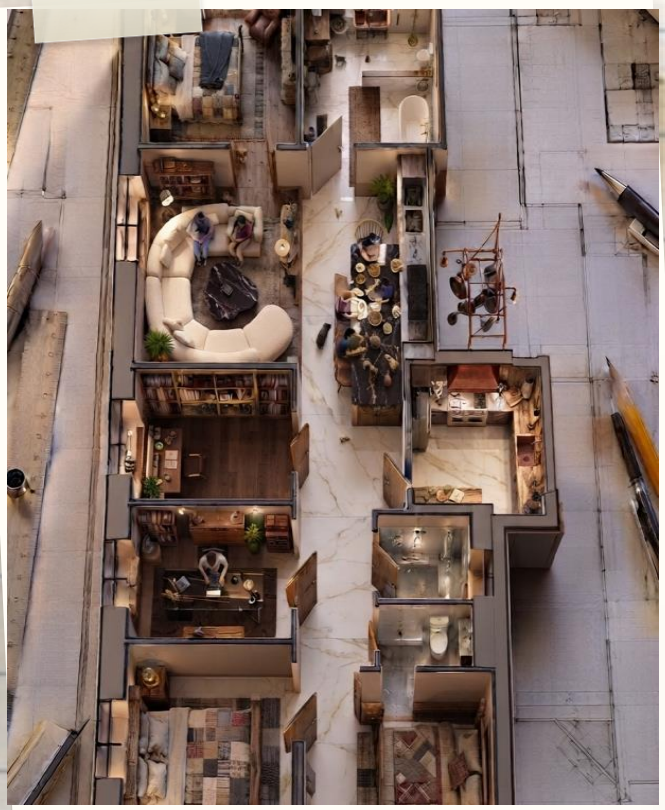
Actions and miniature life scenes, plus the character of the light: two people chatting on the sofa, a set dinner table, warm studio light.

Human figures are not a whim: they give scale to the spaces and turn a render into a scene. Always include at least one or two.

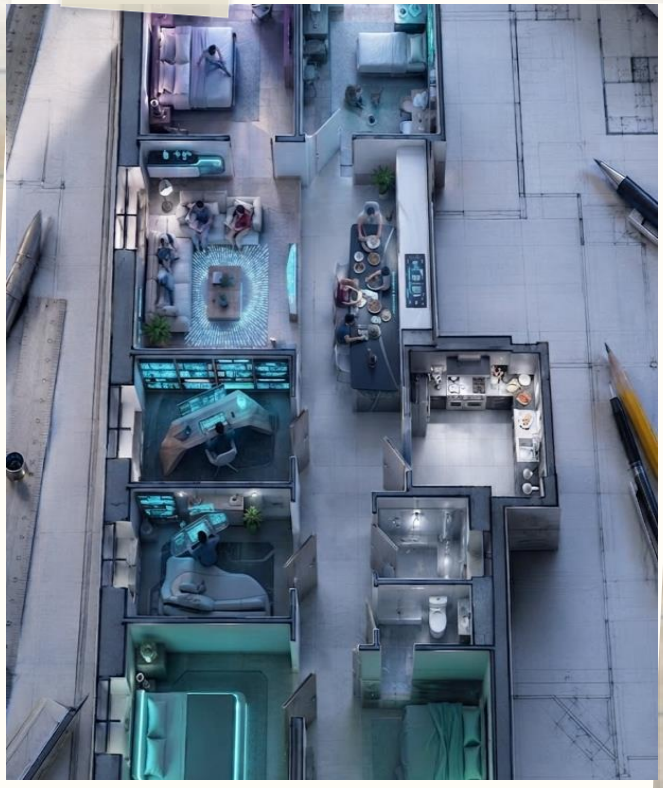
Filled-in example

The same prompt, with the variables replaced. By changing only furniture, materials and light you get very different stylistic registers from the same floor plan.

> ***...master bedroom materializes with a patchwork quilt bed and brass reading lamps while someone reads at dawn takes place; open-plan living room develops featuring a curved ivory sofa on a veined marble floor alongside two people in conversation; home office expands with a full-height walnut bookcase and warm directional desk light...***



Warm, tactile register



Cool, technological register

Same walls, same openings: only the story changes.

4 • Vertical time-lapse

The static image becomes a video: the wall extruding in front of the viewer is the most engaging format of all.

Starting frame

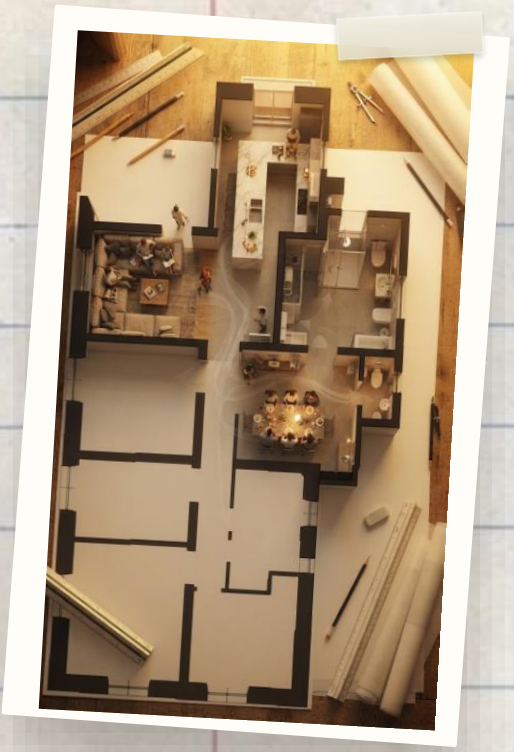
Use the static 2D floor plan as the first frame of the video generator: it is the origin of the motion.

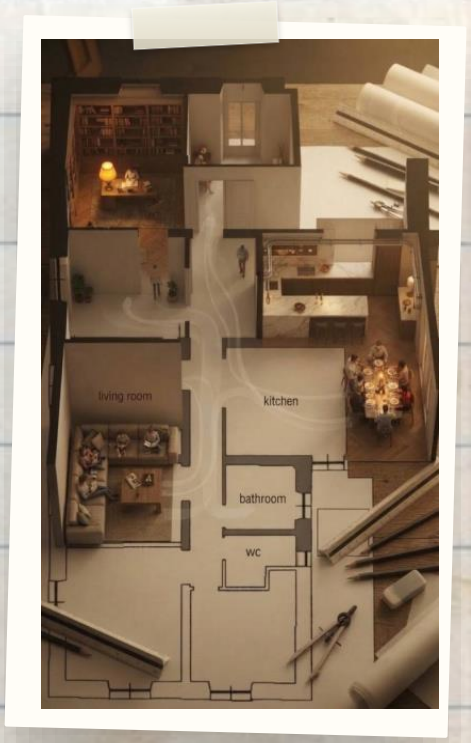
Motion prompt

A smooth architectural time-lapse animation starting from the static 2D blueprint, seamlessly simulating structural wall extrusion, technical layout integration, and progressive interior furnishing down to the final photorealistic 3D architectural model.

Post-production

Consider adding subtle light effects during editing to enhance the materials: a reflection sliding over marble or wood makes the surface perceptible.





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