

# APPENDIX for “Aladdin: Zero-Shot Hallucination of Stylized 3D Assets from Abstract Scene Descriptions”

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## 1 TEMPLATES FOR SEMANTIC UPSAMPLING

The templates used during the semantic upsampling stage of the system to perform in-context learning with GPT-3 are manually created. We create 4 templates, used different combinations during semantic upsampling phase as the model’s focus moves down the scene hierarchy.

The first template is used to extract “anchor” objects of a scene:

Here we are building a 3D scene of a french restaurant. At each step, we are not adding more than 8 assets in total into the scene.

First, we place the most important assets (e.g. furnitures, bigger objects) and use those as our anchors. Here is a list of them:

- \* Tables : 1
- \* Chairs : 4
- \* Bar : 1
- \* Bar stools : 2

The second template is used to progress *down* the asset hierarchy towards the more peripheral (and sometimes more decorative) assets.

Next we enhance the scene with more assets, in relation to the anchor objects. In relation to the ‘table’, here is the list of assets we add:

- \* Tablecloth : 1
- \* Plates : 4

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- \* Silverware : 4
- \* Wine glasses : 2

At each level of the hierarchy we can generate appearance attributes by conditioning the LLM input with this template:

Suppose we want to create a shopping list for the items we need to create the above scene of a fancy french restaurant. It would look like, being specific about the brand and the visual properties:

- \* Table : country style farmhouse table, oakwood and dark brown.
- \* Chairs : provincial style chairs, upholstered in ivory velvet.
- \* Bar : Traditional style bar counter, white marble, gold accents on the corners.
- \* Bar stools : provincial style bar stools, upholstered in ivory velvet, golden accents on corners

As well as their physical condition, by conditioning using this template:

Describe the physical condition of these items in a scene of a fancy french restaurant:

- \* Table : smooth, polished finish.
- \* Chairs : slight signs of wear on the sides.
- \* Bar : slight signs of wear.
- \* Bar stools : slight wear on the rattan seats.

It is possible that using only a small set of templates based on a single indoor scene may limit the LLM’s ability to perform semantic upsampling for outdoor scenes. We see such behavior in Figure 31, a failure case of our system. Future works should consider how to better incorporate a more diverse set of templates to improve the system’s generalizability to outdoor scenes and other scenes.

## 2 INPUT SCENE DESCRIPTIONS, SEMANTIC SHOPPING LISTS & SCENE RENDERINGS

Below, we display the semantic shopping lists and scene renderings for each of the 20 scenes mentioned in the main paper. 11 were selected randomly for the user study, and have baseline visualizations used for our human evaluation. For each scene, its input scene description and the corresponding scene reference (used in tables in the Experiments section of the main paper) is indicated in the section title. A star (★) indicates that the scene was selected for the user study.

## 2.1 (★) Poseidon's living room (poseidon living room)– Figures 1 and 2

Input Scene Description : **Poseidon's living room** Semantic shopping list

- (1) throne: with intricate carvings of ocean life.glossy, polished finish.
- (2) fur rug: ivory and white with a hint of blue.soft and fluffy, with subtle wave patterns.
- (3) pillows: navy blue with gold accents.plump and luxurious.
- (4) candelabras: gold-plated with intricate designs.shiny and lustrous.
- (5) shield: gold-plated with intricate designs.gleaming and regal.
- (6) trident: gold-plated with intricate designs.sturdy and majestic.
- (7) fireplace: with blue marble accents and a marble mantel.smooth, polished stone.
- (8) firewood logs: split and ready to burn.clean and dry, ready to burn.
- (9) coal bucket: clean and unscratched.
- (10) fire poker: free of rust and in good condition.
- (11) fireplace screen: clean and undamaged.
- (12) candelabra: shiny with no visible signs of wear.
- (13) couches: upholstered in a deep navy blue.plush and soft, with no signs of wear.
- (14) throw pillows: soft and fluffy to the touch.
- (15) blankets: crisp and plush.
- (16) candlesticks: shiny and well-polished.
- (17) books: new and pristine condition.
- (18) ottoman: with gold accents and an ocean-blue tufted upholstery.no signs of wear, pristine condition.
- (19) pillows: plump and pristine, with no signs of wear.
- (20) carpet: plush and vibrant, with no signs of wear.
- (21) vase with flowers: vibrant and fresh, with no signs of wear.
- (22) bowl with fruits: vibrant and colorful, with no signs of wear.
- (23) books: sturdy and well-preserved, with no signs of wear.
- (24) mermaid statues: standing atop two large seashells.smooth marble, with intricate details in the carvings.
- (25) seashells: white and glossy.smooth, glossy finish.
- (26) fish statues: intricately detailed.no signs of wear or discoloration.
- (27) coral: intricate patterns and realistic texture.vibrant colors, no signs of fading or discoloration.

## 2.2 (★) A romantic french restaurant (romantic restaurant)– Figures 3 and 4

Input Scene Description : **a romantic french restaurant** Semantic shopping list

- (1) tables: two-tone oakwood finish.smooth, polished finish.
- (2) tablecloths: crisp and clean.
- (3) plates: no chips or cracks.
- (4) silverware: polished and gleaming.
- (5) wine glasses: no scratches or smudges.
- (6) candles: unburned and fragrant.
- (7) flowers: bright and freshly blooming.
- (8) chairs: upholstered in ivory velvet.slight signs of wear on the sides.
- (9) chair cushions: ivory color.soft and fluffy.
- (10) table linen: clean and wrinkle free.
- (11) candles: scented with lavender.in perfect condition, no dripping wax.
- (12) flower vase: polished and sparkling.
- (13) centerpiece: intricately detailed and in perfect condition.
- (14) bar: white marble, gold accents on the corners.slight signs of wear.
- (15) bar stools: upholstered in an off-white velvet fabric, with gold accents on the corners.slight signs of wear on the fabric.
- (16) wine glasses: with golden rims.shiny, with no signs of wear.
- (17) cocktail shakers: sleek and modern design.clean, no signs of wear.
- (18) coasters: with a distressed finish and a gold laurel leaf in the center.slight scratches due to regular use.
- (19) bottle openers: with a sleek and modern design.shiny and unscratched.
- (20) bar stools: upholstered in ivory velvet, golden accents on corners.slight wear on the rattan seats.
- (21) tablecloth: white and ivory.crisp and clean, no signs of wear.
- (22) coasters: white marble coasters with gold accents.smooth, polished finish.
- (23) ashtrays: black marble ashtrays with gold accents.slight signs of wear.
- (24) bar napkins: white and ivory.crisp and clean, no signs of wear.
- (25) cocktail shaker: smooth, polished finish.
- (26) chandelier: with crystal pendants and antique gold finish.ornate carvings and sparkling crystal pendants.
- (27) candles: ivory wax.melting wax and spreading soft light.
- (28) beaded curtains: ivory color.shimmering in the light, hanging gracefully.
- (29) wall sconces: gold metal with intricate designs.slightly aged, but still gleaming with their intricate designs.
- (30) lamps: ivory porcelain base with gold accents.softly illuminating the room in a warm and inviting light.
- (31) sofa: upholstered in ivory velvet, with golden accents on the legs.slight signs of wear on the velvet upholstery.
- (32) pillows: ivory and burgundy color.soft and fluffy.
- (33) blanket: ivory and burgundy color.smooth and plush.

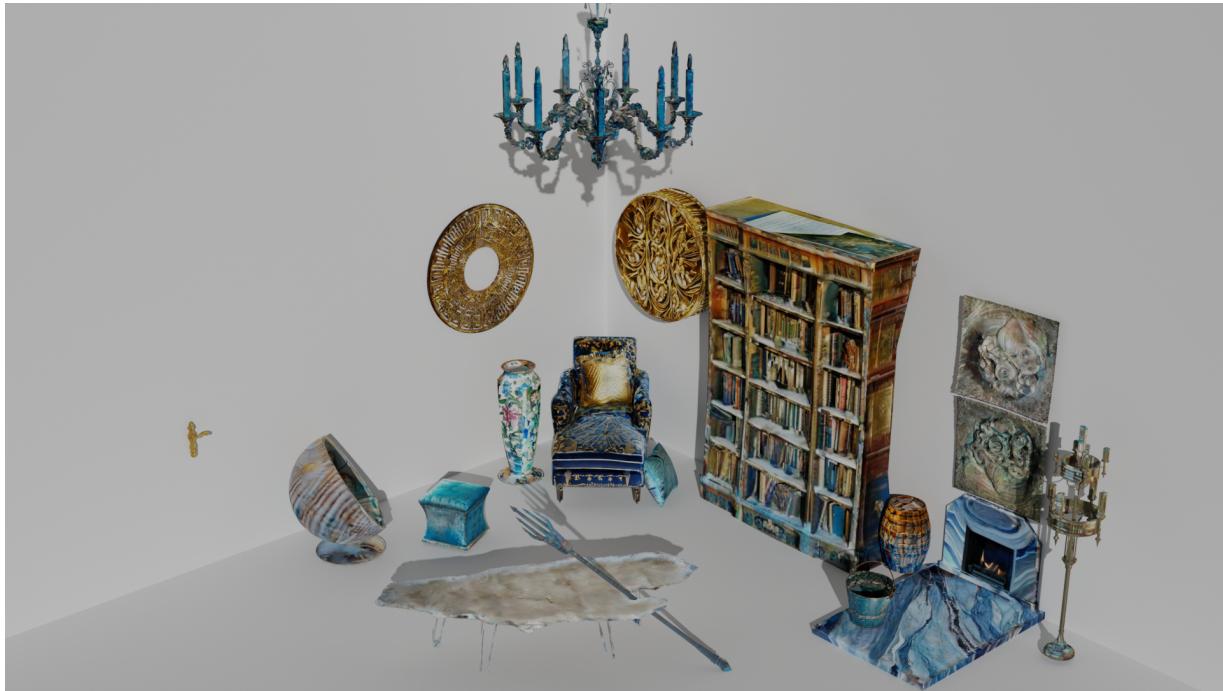


Fig. 1. Our output for “Poseidon’s living room”

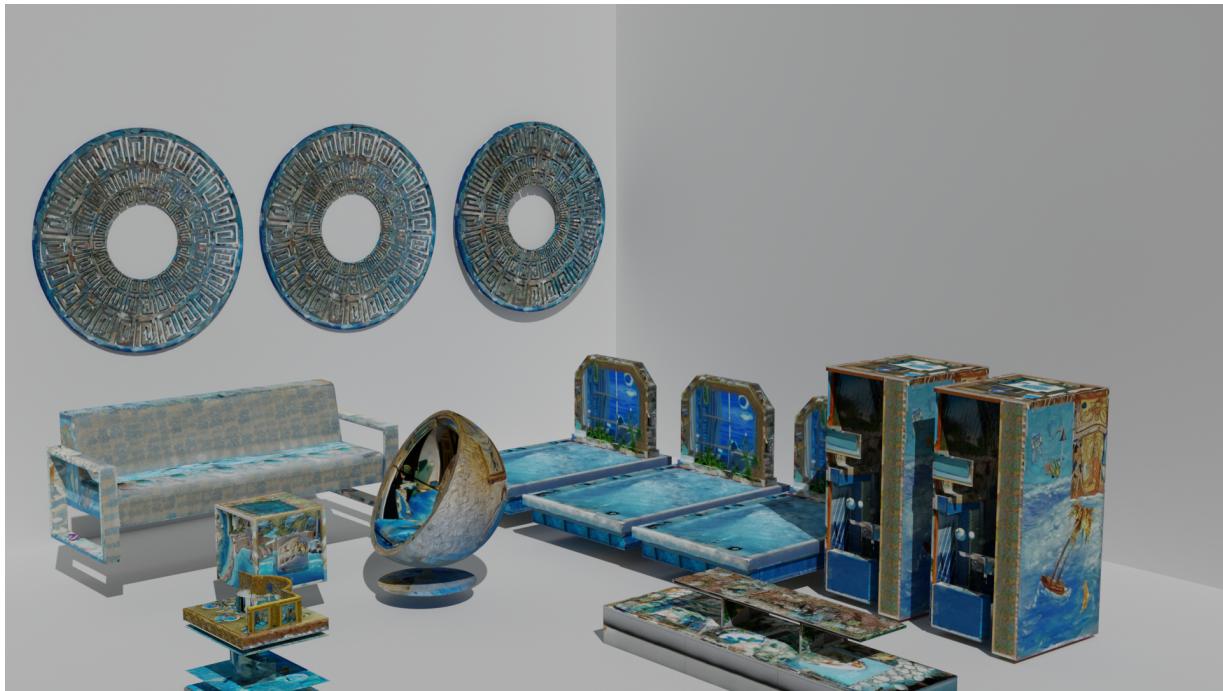


Fig. 2. Baseline output for “Poseidon’s living room”

- (34) end table: whitewashed oakwood, gold accents.smooth polished finish.
- (35) lamp: bronze base, ivory drum shade.no signs of wear.
- (36) candles: ivory and burgundy color.unscented.
- (37) fireplace: ornate carvings and polished gold accents.
- (38) firewood: cut into 16-inch lengths.freshly cut and dried.
- (39) fireplace tools: black finish.smooth and glossy finish.
- (40) candles: scented with lavender.unscented, clean surfaces.
- (41) throw pillows: in a pink and gold pattern.bright and vibrant colors.
- (42) rug: in ivory and blue.tightly woven, plush texture.
- (43) wall art: with gilded frame.crisp colors and gilded frame.
- (44) curtains: off-white color, with ruffles and lace.crisp and clean, with no signs of fading or wear.
- (45) vase: with intricate designs.shiny and sparkly, with no nicks or scratches.
- (46) flowers: in pink and ivory shades.soft and fragrant, looking freshly cut.
- (47) candle holder: gold plated.smooth and polished finish with no signs of rust.
- (48) candles: beeswax, scented with lavender.no signs of melting, wax evenly distributed.

### 2.3 (★) A retro arcade in the style of the 1980s (retro arcade) – Figures 5 and 6

- Input Scene Description : **a retro arcade in the style of the 1980s** Semantic shopping list
- (1) pinball machine: featuring lights and sound effects from the 80s.brightly lit led lights, glossy finish and smooth movement.
  - (2) flippers: black with chrome accents.minor scratches on the chrome accents.
  - (3) pinball bumpers: bright and colorful with cartoon characters.vibrant colors and cartoon characters on the bumpers.
  - (4) pinball slingshots: chrome with black accents.light rust on the chrome accents.
  - (5) arcade machine: space invaders, etc.slight signs of wear on the buttons and joystick.
  - (6) atari posters: bright colors and bold font.crisp colors, no rips or tears.
  - (7) joysticks: bright colors with red and blue buttons.no signs of wear, bright colors.
  - (8) retro speakers: chrome and with a retro design.no signs of wear, polished chrome finish.
  - (9) coin dispenser: metal with a retro design.slight signs of wear, chrome finish still intact.
  - (10) bar: preferably in a bright color.shiny finish with slight signs of wear.
  - (11) neon-lights: brightly illuminated, no signs of wear.
  - (12) drinks: full bottles with clean and crisp labels.
  - (13) beer mugs: free of chips and cracks, vibrant colors.
  - (14) ashtrays: no signs of wear, vivid colors.

- (15) bar stools: some rust on the metal frames, but vinyl seats still vibrant in color.
- (16) neon signs: operated with a remote.brightly lit and colorful.
- (17) ashtrays: slightly faded with signs of wear.
- (18) retro music system: cassette player, and cd player.dusty and slightly weathered.
- (19) retro decorations: highly detailed and brightly-colored.
- (20) retro seating: preferably in bright colors.slight signs of wear on the fabric, but still vibrant in color.
- (21) throw pillows: slightly faded, with some minor signs of wear.
- (22) drink holders: slightly tarnished, but still in good condition.
- (23) cushions: slightly faded and worn, but otherwise in good condition.
- (24) vintage poster: slightly faded, but still vibrant colours.

### 2.4 (★) Anne frank's room during world war II (anne frank room)– Figures 7 and 8

Input Scene Description : **anne frank's room during world war II** Semantic shopping list

- (1) bed: made of solid wood.slightly weathered and with a few scuffs.
- (2) blanket: beige color.discolored with age, but still intact.
- (3) pillow: white cover.slightly lumpy from years of use.
- (4) bedside table: dark brown stain.well-worn with scratches and chips.
- (5) lamp: yellow glass shade.tarnished, but still functional.
- (6) book: embossed cover.faded around the edges, with notes written inside.
- (7) clothes: blue and white checkered patterns.slightly worn, but still in good condition.
- (8) desk: wooden construction and a dark wood finish.slightly worn on the edges.
- (9) pencils: natural wood color.slightly worn and dull, with a few scratches.
- (10) books: with antique paper pages.faded covers, pages slightly yellowed from aging.
- (11) paper: aged look.delicate and fragile, with visible signs of wear.
- (12) postcards: slightly faded, with minor creases and wrinkles.
- (13) bookshelf: slightly worn on the edges.
- (14) books: with the original cover design.slightly worn cover with some fading.
- (15) candle: with a simple black holder.wax melted down to the base.
- (16) picture frame: with a white matte finish.slight scratches on the corner of the frame.
- (17) doll: wearing a white dress with a floral pattern.age-related discoloration, with some loose threads.
- (18) chair: slightly worn on the fabric.

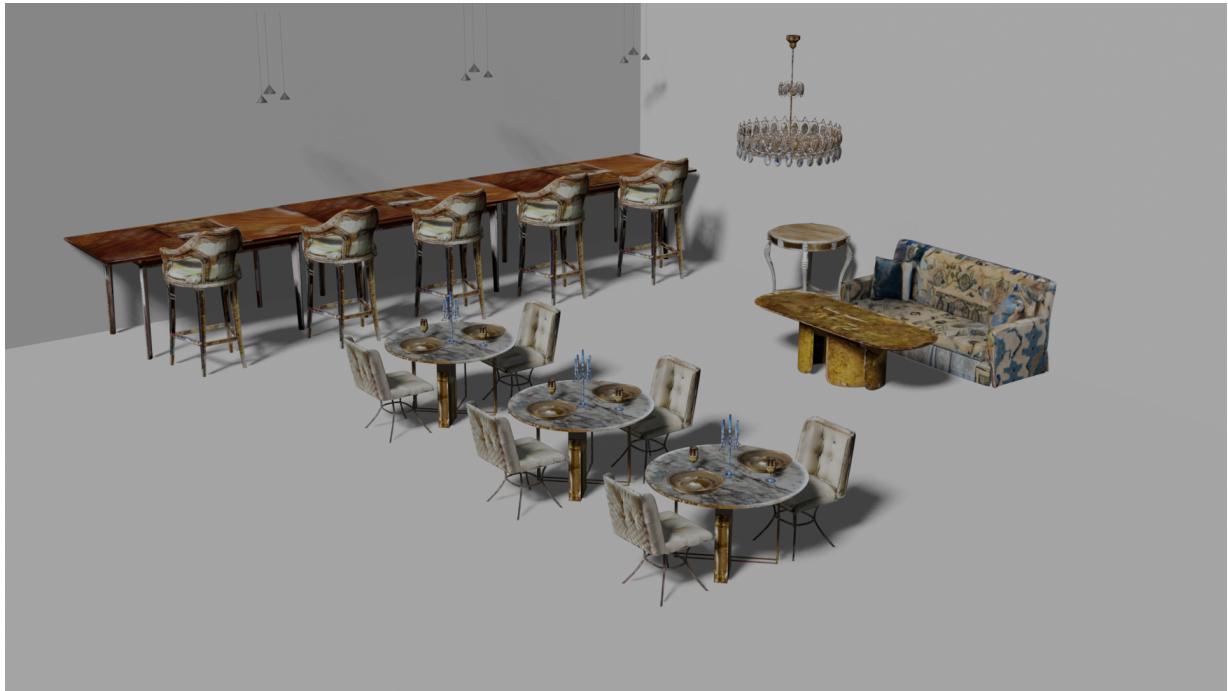


Fig. 3. Our output for “a romantic french restaurant”



Fig. 4. Baseline output for “a romantic french restaurant”



Fig. 5. Our output for “a retro arcade in the style of the 1980s”



Fig. 6. Baseline output for “a retro arcade in the style of the 1980s”

- (19) cushion: patchwork design with embroidery.slightly worn and faded from time.
- (20) blankets: one with patchwork, the other plain.slight fraying and discoloration from wear.
- (21) books: such as anne of green gables or the adventures of tom sawyer.faded pages, with some discoloration due to age.
- (22) pen: with an ornate design.slight wear from age, but still usable.
- (23) notebook: with embossed floral design.vintage leather, but still in good condition.
- (24) clothes: gray or navy with white buttons.slightly faded, but still in wearable condition.
- (25) cabinet: some scratches, but overall in relatively good condition.
- (26) books: slightly faded and tattered covers.
- (27) clothes: simple and worn.
- (28) photos: slightly faded and yellowed.
- (29) letters: wrinkled and slightly faded.
- (30) curtains: slightly faded and with some small tears.
- (31) window: with a thin glass pane and black iron hingesslightly worn with scratches from use, but still in good condition.
- (32) photos: crisp black and white photos, without any discoloration.
- (33) books: in a variety of colors such as black, brown, and red.some signs of wear on the spines and edges, but overall in good condition.
- (34) bedding: slightly worn from years of use, but still in good condition.
- (35) clothes: and warm sweaters in muted colors.slightly worn, but still in good condition.

## 2.5 (★) The interior of the smurf house (smurf house)– Figures 9 and 10

- Input Scene Description : the interior of the smurf house**  
Semantic shopping list
- (1) mushroom house: blue and white in color.new and pristine
  - (2) mushrooms: with blue-green dots.vibrant colors, no chips or cracks.
  - (3) flowers: petals slightly wilted, with no fading of colors.
  - (4) window frames: smooth surface, no signs of wear and tear.
  - (5) fireplace: no signs of wear or discoloration.
  - (6) trees: green leaves.vibrant with fresh leaves
  - (7) wildflowers: vibrant and lifelike, with no tears or signs of wear.
  - (8) leaves: soft to the touch, with no rips or tears.
  - (9) acorns: glossy and realistic, with no cracks or chips.
  - (10) mushrooms: white caps, and red spots.smooth and glossy, with no tears or creases.
  - (11) table: clean and smooth

- (12) tablecloth: crisp and clean.
- (13) plates: no chips or cracks.
- (14) silverware: no tarnishing.
- (15) smurf-shaped cupcakes: with edible smurf decorations.freshly baked and frosted.
- (16) chairs: sturdy and clean
- (17) flowers: in various shapes.pristine condition, no signs of wear or tear.
- (18) birdhouse: with a pointed roof.freshly painted and in good condition.
- (19) gnome figurines: dressed in traditional smurf attire.vibrant colors, no chips or cracks.
- (20) paintings: crisp edges, no fading of colors.
- (21) smurf figures: new and vivid in color.
- (22) mushrooms: bright and glossy, with no signs of wear.
- (23) flowers: bright and vibrant colors, no signs of fading.
- (24) fishing rod: smooth and painted with bright colors, no signs of wear.
- (25) basket: tightly woven and sturdy, no signs of fraying.

## 2.6 (★) A murder in an abandoned living room (murder room)– Figures 11 and 12

- Input Scene Description : a murder in an abandoned living room**  
Semantic shopping list
- (1) couch: stained and torn fabric, fraying at the edges.
  - (2) pillows: slightly worn and stained.
  - (3) blankets: light grey torn and stained.
  - (4) blood stains: dried and smeared across surfaces.
  - (5) magazine: preferably one from the 1960saged and yellowed.
  - (6) candle: melted and partially burned.
  - (7) lamp: dusty and cobwebbed.
  - (8) table: made from teak wood.scuffed and scratched surfaces.
  - (9) lamp: dusty and worn.
  - (10) papers: scattered on the floor.
  - (11) pen: traces of dried ink on the nib.
  - (12) gun: scratched and worn.
  - (13) blood spatters: with a realistic texture.slightly damp in places.
  - (14) desk: made of reclaimed wood.dust and dirt accumulated in the corners.
  - (15) lamp: bronze and cream.tarnished, dented, and dusty.
  - (16) pen holder: scuffed and scratched.
  - (17) pens/pencils: dull, worn, and faded.
  - (18) stack of paper: aged parchment paper.yellowed and aged.
  - (19) mug: with a faded sketch of a crow.chipped and cracked.
  - (20) chair: upholstered in a grey linen fabric.signs of wear in the upholstery.
  - (21) pillow: slightly stained and worn out.
  - (22) blanket: faded grey.discolored and frayed.
  - (23) candle: waxen and melted.



Fig. 7. Our output for “anne frank’s room during world war II”

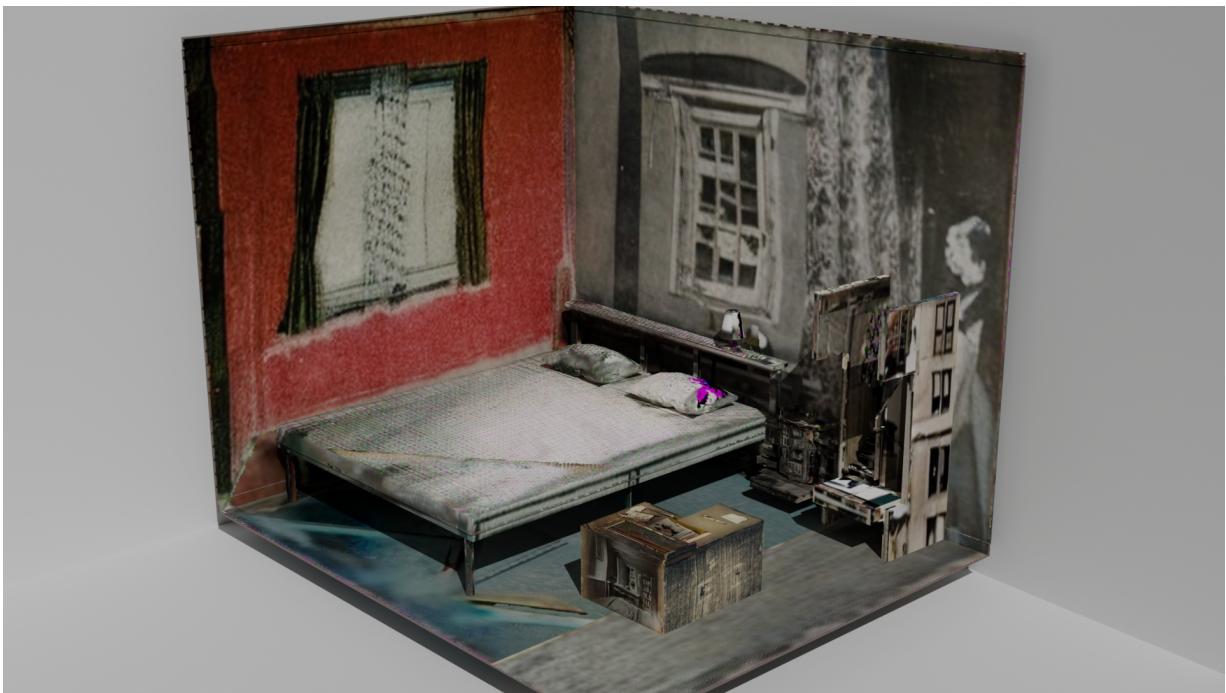


Fig. 8. Baseline output for “anne frank’s room during world war II”



Fig. 9. Our output for “the interior of the smurf house”



Fig. 10. Baseline output for “the interior of the smurf house”

- (24) book: discolored pages with visible creases and wrinkles.
- (25) newspaper: torn and crumpled.
- (26) coffee cup: cracked handle.broken handle and stained.
- (27) bottle: empty, with a cork stopper.empty, with a cork stopper.
- (28) window: cracked and broken glass.
- (29) shattered glass: silver and black.shards of broken glass scattered on the floor.
- (30) curtains: black and grey.torn and tattered.
- (31) window blinds: black and grey.torn and damaged, some of the slats are missing.
- (32) bullet hole: black.a large circular hole in the wall with frayed edges.
- (33) blood stains: red and black.dark red splatters on walls and furniture.
- (34) door: made of reclaimed wood.large dents and scratches.
- (35) key: rusty and tarnished.
- (36) knob: rusty and tarnished.
- (37) light switch: flickering and weak.
- (38) window curtains: black velvet curtains.ripped and tattered.
- (39) bloodstain: red, water-based paint.fresh and bright.
- (40) lamp: bronze with a white shade.slightly dusty.
- (41) photo frame: antique gold frame for a 4x6 photo.slightly dusty and cracked.
- (42) rug: faded colors and worn out threads.
- (43) blood stains: non-toxic and non-hazardous.smeared and splattered on the walls and floors.
- (44) broken glass: realistic-looking, made of plastic.scattered across the room in pieces.
- (45) empty beer bottle: made of plastic.lying upside down on the floor.
- (46) bloodied knife: lying next to the empty beer bottle.
- (47) bullet casing: made of plastic.scattered across the floor.
- (48) bloodied rag: lying in a corner of the room.

## 2.7 (★) Bedroom in Shrek's home in the swamp (shrek home)- Figures 13 and 14

Input Scene Description : **bedroom in shrek's home in the swamp** Semantic shopping list

- (1) bed: dark wood with green fabric accents.sturdy and in good condition.
- (2) pillows: fluffy, with no signs of wear.
- (3) blanket: slightly worn edges, with a soft texture.
- (4) stuffed animal: plush, cartoon-style ogre.soft, plush, with no signs of wear.
- (5) books: slightly tattered corners, with no major scuffs or scratches.
- (6) shoes: cartoon-style ogre shoes.new, with bright colors and sturdy soles.
- (7) cabinet: green paint with gold accents.minor signs of wear.

- (8) cabinet knob: cast iron with a green and gold finish.slightly worn, with a few scratches.
- (9) dishes: with a green and brown glaze.no chips or cracks, with a glossy finish.
- (10) bowls: with a green and brown glaze.no chips or cracks, with a glossy finish.
- (11) mugs: with a green and brown glaze.no chips or cracks, with a glossy finish.
- (12) desk: distressed wood with iron accents.minor signs of wear.
- (13) pencil holder: stained with a dark green finish.sturdy, with no visible scratches.
- (14) notepad: wooden notepad with a "shrek" motif carved on the cover.smooth, with no visible signs of wear and tear.
- (15) pens: with green and yellow feathers, stored in a velvet pouch.clean and sharp, with no visible stains.
- (16) books: bound in green leather and embossed with golden lettering.unmarked, with gold lettering intact and no visible wear and tear.
- (17) chair: green velvet upholstery and gold accents.minor signs of wear.
- (18) blanket: soft and warm.
- (19) bookshelf: well-crafted and sturdy.
- (20) books: featuring characters from the shrek movie.new and in pristine condition.
- (21) rug: green and gold motif.thick and plush.
- (22) throw pillows: squishy texture.fluffy with no visible signs of wear.
- (23) blanket: plaid design woolen blanket in brown and green tones.free from any snags or tears.
- (24) bookshelf: smooth, polished finish with minimal signs of wear.
- (25) books: perfectly bound and crisp pages with no signs of fading.
- (26) lamp: green glass with bronze accents.no chips or cracks.
- (27) lamp shade: smooth and polished finish with vibrant colors.
- (28) lightbulb: bright and evenly lit.
- (29) lampshade finial: smooth and well-polished.
- (30) lamp base: smoothly painted with vibrant colors.
- (31) lampshade fringe: soft and lightweight.
- (32) lampshade harp: shiny and polished with a patina finish.
- (33) lampshade diffuser: vibrant colors and free of wrinkles.
- (34) wall art: framed in gold.vibrant colors, free of any damage.
- (35) stuffed animals: one donkey and one puss in boots.soft and cuddly.
- (36) painting: depicting various characters from the movie.vivid and colorful.
- (37) picture frame: sturdy and unblemished.
- (38) bookshelf: with a whimsical design.polished and smooth-to-the-touch.



Fig. 11. Our output for “a murder in an abandoned living room”



Fig. 12. Baseline output for “a murder in an abandoned living room”

- (39) books: titles to include "shrek's adventures" and "fairy tales of the swamp".crisp pages, with vibrant illustrations.

## 2.8 (★) Confucius's bedroom (confucius bedroom)– Figures 15 and 15

**Input Scene Description : confucius's bedroom** Semantic shopping list

- (1) bed: solid oak wood, dark brown finish.gently worn but still in good condition.
- (2) pillows: with intricate golden embroidery.soft and plush.
- (3) blankets: with tassels and embroidered motifs.soft and smooth to touch.
- (4) bedside cabinet: carved with dragons and made of dark wood.polished and gleaming.
- (5) scrolls: unrolled and in perfect condition.
- (6) incense burner: with dragon etchings.bright and shining.
- (7) dresser: painted with floral motifs, gold accents.some signs of wear but still colorful and vibrant.
- (8) boxes: lacquered in gold.lightly distressed with some wear around the edges.
- (9) scrolls: mounted and framed.bright and colorful, lightly aged.
- (10) books: hardcover in blue and green.slightly faded covers with faint traces of wear.
- (11) vases: painted with floral motifs.some signs of wear and cracking, but still in good condition.
- (12) desk: dark cherry wood, golden detailing.well-maintained with a slight patina.
- (13) pen holder: glossy, with intricate carvings on the edges.
- (14) ink stone: made of black slate.polished smooth surface.
- (15) ink brush: made of bamboo and horsehair bristles.bristles in perfect condition.
- (16) scroll: with calligraphy writing.no signs of wear or tear.
- (17) papers: made of hemp.crisp and clean.
- (18) chair: carved and upholstered in silk.well-maintained with minimal signs of wear.
- (19) blanket: plain blue or red with yellow embroiderysoft and well worn.
- (20) bookshelf: dark brown, metal accents on edgeswell-polished with metal accents gleaming.
- (21) books: aged and well-handled, with a few loose pages.
- (22) scroll: traditional red or black inkcrisp and vibrant, with the ink color vividly preserved.
- (23) inkstone: black stone with carved dragon designglossy and smooth, with the dragon design still clearly visible.
- (24) bamboo screen: natural brown.strong and sturdy, with a few scratches.
- (25) scrolls: with chinese characters.bright colors, free of tears and creases.
- (26) ink-stone pot: ceramic, with intricate patterns.smooth, polished finish, free of scratches and cracks.

- (27) brush and ink: bristles are intact, handle is strong and sturdy.
- (28) calligraphy scrolls: with chinese characters.neatly cut edges, free of tears and wrinkles.
- (29) paper fans: with painted chinese characters.no tears or creases, colors are still vibrant.
- (30) table lamps: golden finish, hand-painted shades.slightly weathered but still bright and colorful.
- (31) paintings: framed in black lacquer.smooth, glossy finish.
- (32) writing utensils: black lacquer handle.intact and in pristine condition.
- (33) scrolls: framed in black lacquer.slightly yellowed edges from age but overall in good condition.
- (34) candles: with intricate gold designs.intact with no chips or cracks.

## 2.9 (★) A Marvel-themed bedroom of a five-year old toddler (marvel bedroom)– Figures 17 and 18

**Input Scene Description : a marvel-themed bedroom of a five-year old toddler** Semantic shopping list

- (1) bed: red and blue colors.no signs of wear and tear, firm mattress.
- (2) blanket: designed with the avengers characters.bright and vibrant colors with no visible signs of wear.
- (3) pillows: designed with the avengers characters.bright and vibrant colors with no visible signs of wear.
- (4) stuffed toys: no visible signs of wear, with soft and fluffy stuffing.
- (5) marvel posters: with motivational quotes.crisp paper stock, with bright and vibrant colors.
- (6) dresser: red and blue colors.smooth finish, no signs of wear and tear.
- (7) basket for clothes: decorated with captain america imagery.brand new.
- (8) lamp: led lighting.brand new.
- (9) mirror: brand new.
- (10) decorative items: 1- iron man action figure, 1- captain america shield wall art.brand new.
- (11) chair: red and blue colors.no signs of wear and tear, firm supporting cushions.
- (12) pillow: fluffy and soft to the touch.
- (13) blanket: printed with comic book characters.soft and lightweight with vibrant colors.
- (14) marvel figures: 4-6 inches tall.pristine condition with no scratches or marks.
- (15) marvel posters: crisp and vibrant colors, no signs of wear.
- (16) marvel stickers: bright and colorful, no peeling or tearing.
- (17) desk: red and blue colors.smooth finish, no signs of wear and tear.
- (18) desk lamp: with bright colors and a cartoonish design.bright, colorful, and cartoonish design.



Fig. 13. Our output for “bedroom in shrek’s home in the swamp”



Fig. 14. Baseline output for “bedroom in shrek’s home in the swamp”



Fig. 15. Our output for “confucius’s bedroom”



Fig. 16. Baseline output for “confucius’s bedroom”

- (19) pen holder: with bright colors and cartoonish design.bright, colorful, and cartoonish design.
- (20) pencils: with bright colors and cartoonish design.bright, colorful, and cartoonish design.
- (21) notebook: with bright colors and cartoonish design.bright, colorful, and cartoonish design.
- (22) marvel-themed action figures: with bright colors and cartoonish design.brightly colored and cartoonish design, with no signs of wear and tear.
- (23) toy chest: red and blue colors.smooth finish, no signs of wear and tear.
- (24) stuffed animals: iron man, captain america and thor.well-loved, lightly used with minimal fading or wear.
- (25) action figures: iron man, captain america and thor.well-loved, lightly used with minimal fading or wear.
- (26) toys: marvel avengers lego kit, marvel avengers puzzle and marvel avengers playdough set.well-loved, lightly used, with minor scratches and fading.
- (27) books: well-loved, lightly used, with minor creases and scuffs.
- (28) wall art: vibrant colors.vibrant colors, no signs of fading.
- (29) bedding sheets: incredible hulk, thor, and captain america.brightly colored and with a soft texture.
- (30) wall stickers: captain america shield wall stickers, iron man wall stickers and thor hammer wall sticker with 3d effects.high quality and vibrant colors.
- (31) wall decals: detailed designs with 3d effects.
- (32) pillows: soft and fluffy with 3d effects.

## 2.10 (★) A futuristic teahouse from the future in silicon valley (futuristic teahouse)– Figures 19 and 20

**Input Scene Description : a futuristic teahouse from the future in silicon valley** Semantic shopping list

- (1) tables: with a plasma top, stainless steel legs.shiny and reflective surface.
- (2) tablecloths: blue and white geometric pattern.pristine condition without any creases or wrinkles.
- (3) plates: stainless steel with holographic accents.shiny, sleek finish with no chips or scratches.
- (4) silverware: made from titanium with sleek design.clean, smooth and no dents or scratches.
- (5) tea cups: with holographic accents.no chips or cracks, holographic accents in perfect condition.
- (6) holographic menus: with interactive voice activated options.crisp, clear display with no distortions or defects.
- (7) chairs: upholstered in light grey fabric.no signs of wear and tear.
- (8) arm rests: adjustable height.sleek and modern design, polished metal finish.
- (9) cushions: light grey in color with silver accents.soft and comfortable, with no signs of wear.

- (10) holographic menus: adjustable to display any type of menu.bright and vibrant colors, displaying any type of menu in 3d.
- (11) tea dispensers: able to dispense any type of tea.high-tech and modern design, no signs of wear.
- (12) bar: with curved edges and led lighting.smooth, glossy finish.
- (13) tea pot: sleek and shiny, with no signs of use.
- (14) teacups: unworn, with a holographic design shining brightly.
- (15) saucers: unworn, with a holographic design shining brightly.
- (16) holographic menu: brightly glowing, with voice activated commands responding quickly.
- (17) bar stools: upholstered in light grey fabric.no signs of wear and tear.
- (18) holographic napkins: crisp and clean with vibrant colors.
- (19) holographic tea cups: pristine and dust free with vibrant colors.
- (20) holographic saucers: pristine and dust free with vibrant colors.
- (21) holographic teapot: gleaming and unscratched with vibrant colors.
- (22) holographic displays: bright and clear images.
- (23) floating screens: crisp, vibrant colours and high resolution display.
- (24) holographic images: flickerless, with sharp edges and vivid colours.
- (25) interactive screens: responsive to touch and voice commands.
- (26) artificial intelligence (ai) bots: smooth, gliding motions with natural-sounding speech.

## 2.11 (★) A saloon from an old western– Figures 21 and 22

**Input Scene Description : a saloon from an old western** Semantic shopping list

- (1) bar: dark walnut wood, brass foot rail and accents.slightly worn edges, signs of age on the finish.
- (2) bar stools: wooden frames, leather seat cushions.worn, distressed wood finish.
- (3) bottles: clear glass.slightly dusty.
- (4) glasses: faceted crystal glass.etched, lightly scratched.
- (5) bar counter: metal foot rail.weathered, aged patina.
- (6) chairs: upholstered in leather, with metal or wooden frames.soft leather, with a few scuff marks.
- (7) cowboy hats: with weathered bandanas on the sides.slightly dusty, with signs of wear.
- (8) cowboy boots: with weathered stitching.scuffed and worn with age.
- (9) cigars: slightly weathered and dry.
- (10) whisky bottle: aged, with signs of condensation.



Fig. 17. Our output for “a marvel-themed bedroom of a five-year old toddler”



Fig. 18. Baseline output for “a marvel-themed bedroom of a five-year old toddler”

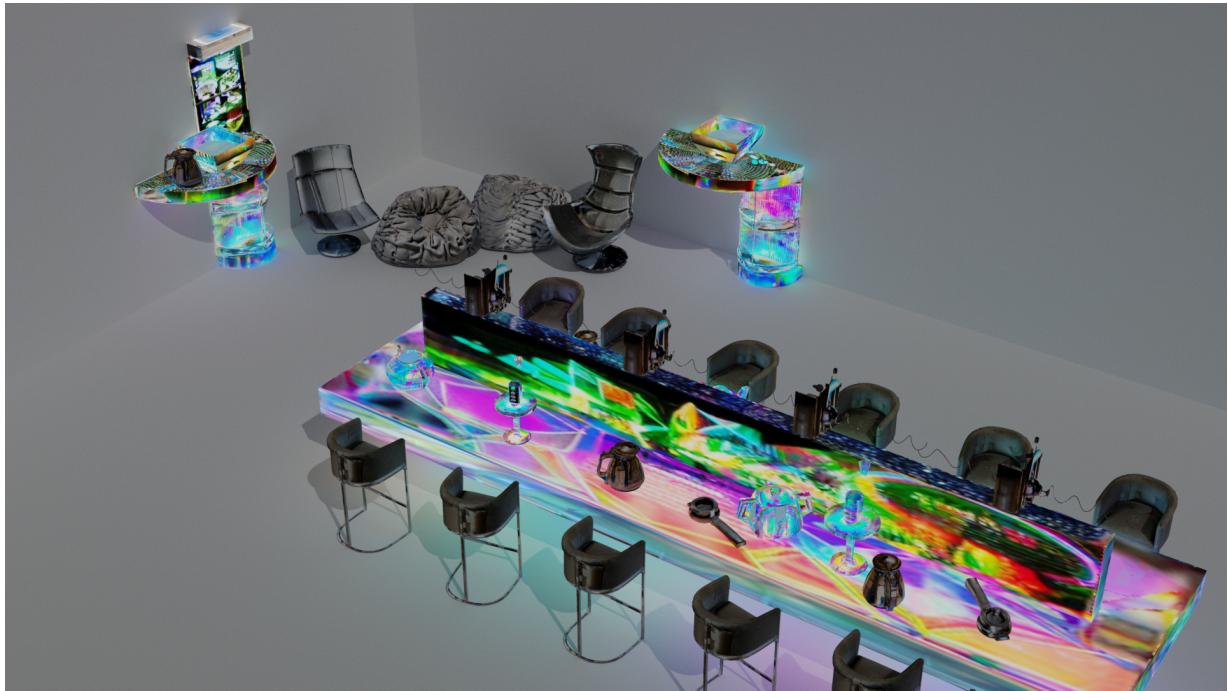


Fig. 19. Our output for “a futuristic teahouse from the future in silicon valley”

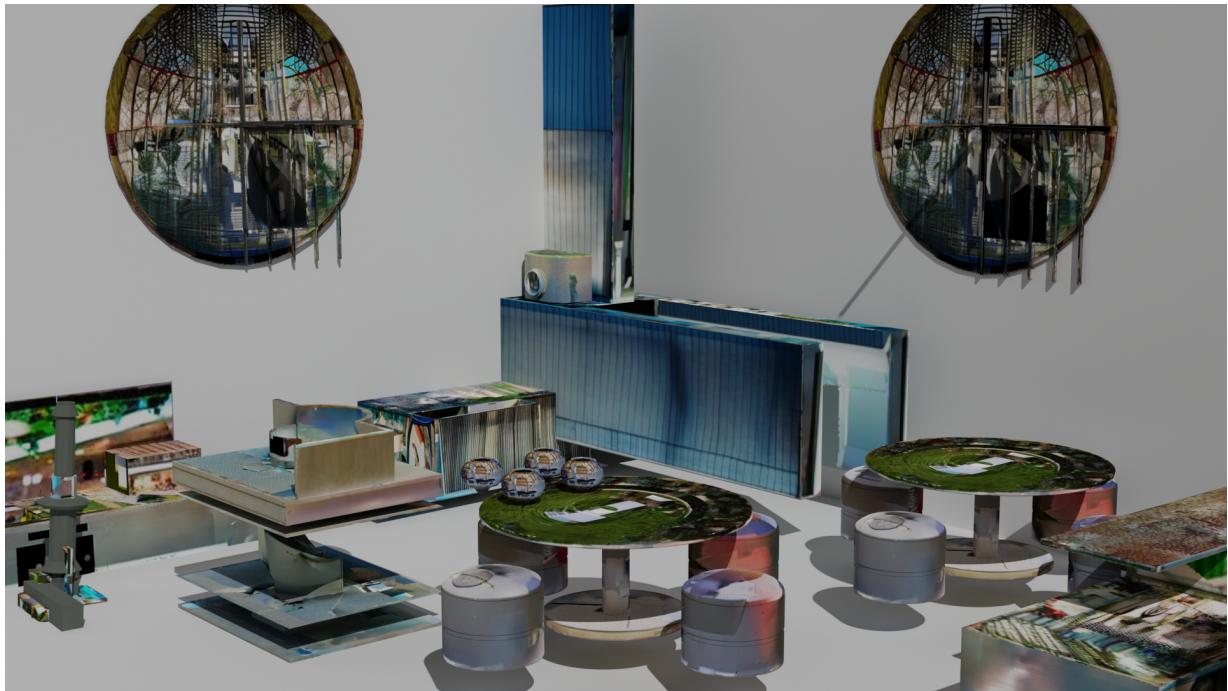


Fig. 20. Baseline output for “a futuristic teahouse from the future in silicon valley”

- (11) tables: wooden legs and a square top.aged wood with a rustic finish, some minor scratches.
- (12) tablecloth: red and white.slightly frayed on the edges.
- (13) beer mugs: black with gold accents.rustic finish, showing signs of wear and tear.
- (14) playing cards: slightly creased edges.
- (15) poker chips: white with red and black accents.lightly worn, with minor scratches.
- (16) counter: wood and metal accents.aged wood with a few dents and scratches.
- (17) whiskey bottle: clear glass and brown stopper.dull glass with some scratches and dull brown stopper.
- (18) shot glasses: clear glass and gold rims.slightly worn edges and faded gold rims.
- (19) poker chips: red and black with gold accents.some chips are slightly faded and chipped.
- (20) ashtray: made of bronze and silver accents.some tarnishing on the bronze and silver accents.
- (21) jukebox: bright colors, and lights.minor wear and tear, with a few chips in the paint.
- (22) music discs: slightly worn edges, but still in good condition.
- (23) coins: slightly tarnished, but still in good condition.
- (24) posters: slightly faded, but still in good condition.
- (25) stools: dark brown finish.slightly worn edges, but still in good condition.

## 2.12 An alien tea garden on Mars (alien teagarden)– Figure 23

- Input Scene Description : **an alien tea garden on mars**  
Semantic shopping list
- (1) alien tea table: metallic finish in a deep purple hue.smooth, glossy finish.
  - (2) alien tea pot: copper metal with silver accents.shiny, polished finish.
  - (3) alien tea cups: glazed ceramic with green and blue accents.smooth and glossy.
  - (4) alien tea spoons: silver metal with gold accents.no signs of wear.
  - (5) alien tea plates: glazed ceramic with blue and purple accents.no signs of wear.
  - (6) alien tea chairs: bright green hue with a glossy finish.no signs of wear.
  - (7) alien tea tablecloths: unblemished and pristine condition.
  - (8) alien tea cups: smooth and glossy finish.
  - (9) alien tea saucers: featuring holographic images.shiny and reflective surface.
  - (10) alien tea kettles: with a sleek design and a futuristic handle.gleaming and metallic look.
  - (11) alien tea bar: dark blue hue with a matte finish.no signs of wear.

- (12) alien tea kettle: with an alien-shaped handle.brand-new, sparkling with glitter.
- (13) alien tea pot: with a star-shaped lid and alien designs on it.brand-new, shimmering with iridescent hues.
- (14) alien tea cups: featuring alien designs on them.brand-new, shining with crystal clarity.
- (15) alien tea saucers: featuring alien designs on them.brand-new, bright with vibrant colors.
- (16) alien tea bar stools: light blue hue with a glossy finish.no signs of wear.
- (17) alien tea cups: with gold accents and a cartoon alien motif.smooth, with no chips or scratches.
- (18) alien tea saucers: with gold accents and a cartoon alien motif.smooth, with no chips or scratches.
- (19) alien tea kettle: with a spout and handle in the shape of an alien head.bright and shiny, with no rust or dents.
- (20) alien tea lights: with alien faces on the front.unused and unwaxed, with bright green glow.

## 2.13 Antichrist in the bedroom of the pope (antichrist vatican)– Figure 24

Input Scene Description : **antichrist in the bedroom of the pope** Semantic shopping list

- (1) bed: crafted with dark, solid wood and royal blue velvet drapes.solid, with slight signs of age.
- (2) pillows: black with golden embroidery.perfectly plump and inviting.
- (3) blanket: black with golden trim.soft and smooth to the touch.
- (4) nightstand: dark wood with gold accents.polished and gleaming.
- (5) lamp: black iron with gold details.intricate and delicate.
- (6) bible: black leather with gold lettering.slightly worn on the edges.
- (7) crucifix: black iron with gold details.detailed and gleaming.
- (8) desk: crafted with mahogany wood, gold accents and a green marble top.smooth, polished finish with subtle gold accents.
- (9) inkwell: made of iron, with a burnished finish.smooth surface, no signs of corrosion.
- (10) quill: gold plated, with a feathery texture.sharpened to a point, no visible fraying.
- (11) book: with intricate designs on the cover.frayed edges, some pages yellowing with age.
- (12) papers: handmade and decorated with gold leaf.intricate designs still visible, slight discoloration on the edges.
- (13) lamp: made of brass, with a matte finish.strong and sturdy with no visible dents.
- (14) chair: upholstered in red velvet with slight signs of wear.
- (15) armrests: made of dark wood, with intricate carvings.smooth, with no scratches or dents.

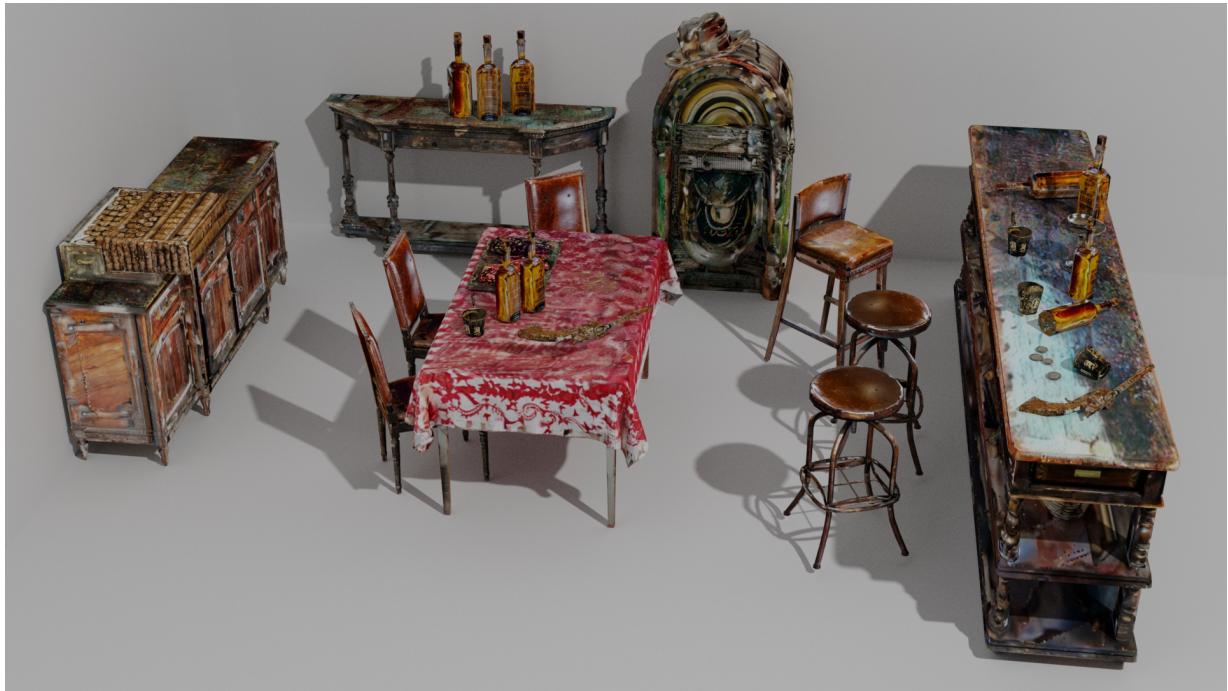


Fig. 21. Our output for “a saloon from an old western”



Fig. 22. Baseline output for “a saloon from an old western”

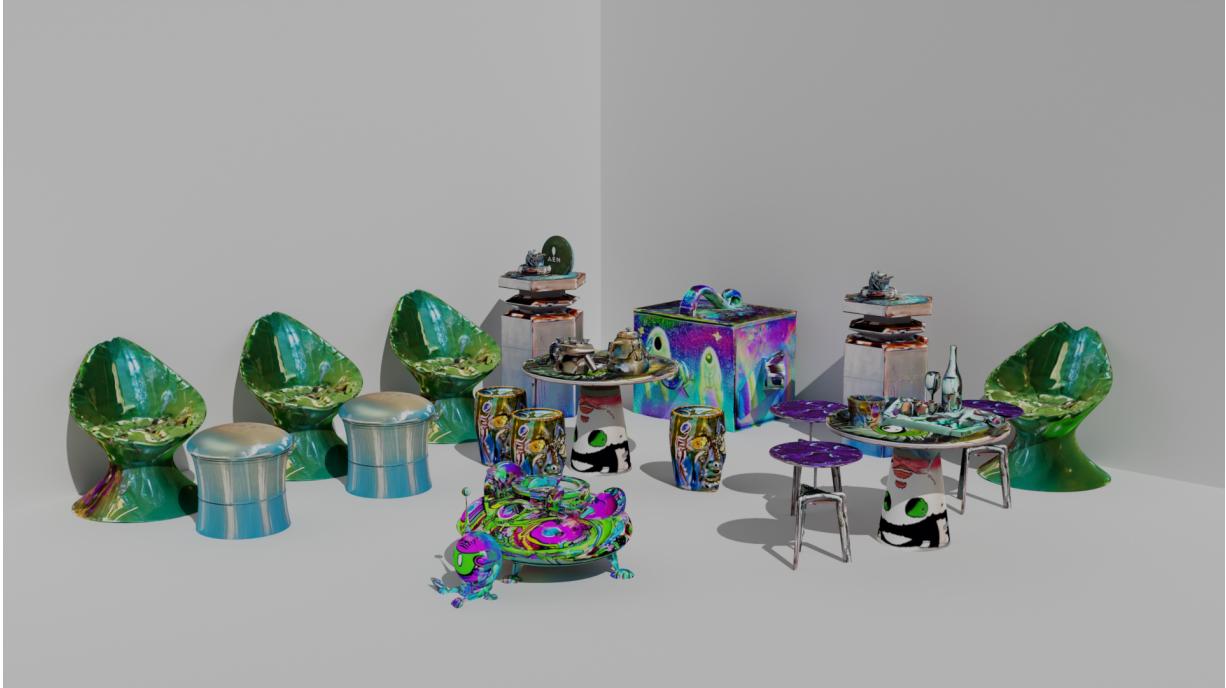


Fig. 23. Our output for “an alien tea garden on mars”

- |   |   |
|---|---|
| (16) pillows: made of velvet with gold accents.soft and plush to the touch.   | (36) incense burner: intricate detailing, polished finish.                      |
| (17) bible: with silver accents and a velvet cover.perfectly preserved with no signs of wear.                                     | (37) crucifix: intricate detailing, polished finish.                            |
| (18) crucifix: unblemished and shining.   | (38) rosary: intricate detailing, polished finish.                              |
| (19) candles: with ornate holders.perfectly shaped and in pristine condition.   | (39) painting: vibrant colors and intricate details, slightly aged.             |
| (20) bookshelf: crafted with mahogany wood, gold accents and a green marble top.smooth, polished finish with subtle gold accents. | (40) frame: polished finish, but with some signs of age.                        |
| (21) books: pages slightly yellowed with age.   | (41) mirror: glossy finish, but with some signs of age.                         |
| (22) cross: glint of gold in the details and worn edges.  | (42) bible: bound with gold leather.binding intact, with some signs of age.     |
| (23) bible: well-worn with traces of use.   | (43) crucifix: made of black iron.black iron, with some signs of oxidation.     |
| (24) candelabra: intricate details with slight signs of age.  | (44) candles: with gold accents.smooth finish with signs of usage.              |
| (25) candlesticks: ornate design.polished and free of tarnish.  | (45) incense: in a gold incense holder.unscented, but with signs of age.        |
| (26) candle: scented red roses.unburned, with the scent of red roses.   | (46) chandelier: gold accents.crystal clear, with gold accents, slightly faded. |
| (27) incense burner: dragon motif.smooth, with intricate designs.   | (47) candles: slightly melted and slightly charred.                             |
| (28) incense sticks: unburned, with the scent of sandalwood.  | (48) chain: slightly rusted and with a few dents.                               |
| (29) bell: with inlaid designs.unrusted, with intricate inlay designs.  | (49) bells: slightly tarnished and with a few dents.                            |
| (30) rug: intricate patterns and colors with slight fading.   | (50) crosses: slightly weathered with a few scratches.                          |
| (31) cross: intricate detailing, polished finish.   |   |
| (32) crown of thorns: aged thorns and a tarnished crown.  |   |
| (33) bible: discoloration on the edges and cover.   |   |
| (34) chalice: intricate detailing, polished finish.   |   |
| (35) candle: wax burn marks and a tarnished candlestick.  |   |

## 2.14 Hades’s man cave (hades cave)– Figure 25

Input Scene Description : **hades’s man cave** Semantic shopping list

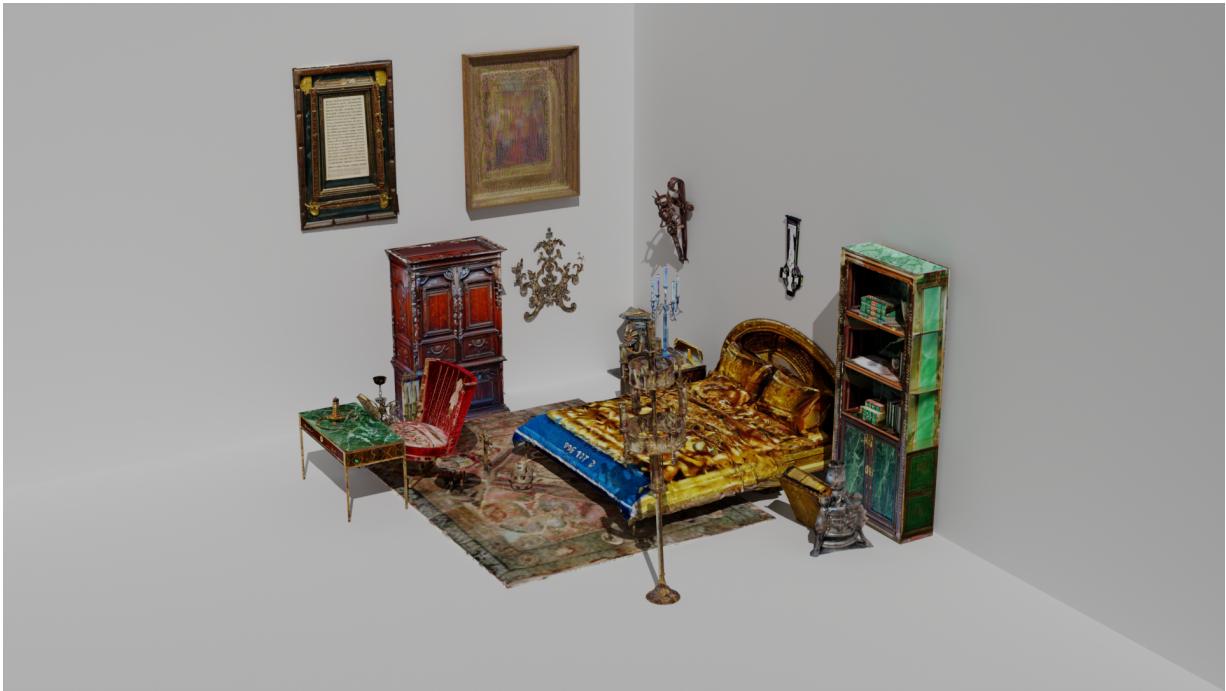


Fig. 24. Our output for “antichrist in the bedroom of the pope”

- |   |  |
|---|--|
| (1) throne: with a raised backrest, and skulls decorated on the sides.smooth, polished metal.   | (18) pearls: white pearls, with a glossy finish.smooth and glossy.                                     |
| (2) red velvet throne cover: pristine condition.  | (19) bookshelf: with intricate carvings.aged and weathered, with intricate details still visible.      |
| (3) skeleton: slightly aged but in pristine condition.  | (20) books: bound in dark leather with golden embossed designs.perfectly preserved and complete.       |
| (4) crown: slightly tarnished but still gleaming.   | (21) scrolls: embossed with ancient runes.slightly weathered with age.                                 |
| (5) chain: slightly worn with a few scratches.  | (22) potions: made of dark glass with ornate cork stoppers.intact, with no signs of tampering.         |
| (6) sword: slightly rusted but still sharp.   | (23) fire pit: with a black iron surround.rustic and sturdy, with a protective black iron surround.    |
| (7) scepter: a few scratches and a bit of tarnish.  | (24) firewood: pre-split for convenience.dry and ready to burn.  |
| (8) scroll: yellowed parchment scroll with ancient writings.slightly faded but still legible.   | (25) fireplace tools: wrought iron with black finish.glossy black finish with no visible rust or wear. |
| (9) bat: black bat with glossy wings.slightly worn but still glossy.  | (26) fireplace grate: black finish.no visible rust or wear.  |
| (10) pit of despair: flickering flames and smoky mist.  | (27) fire poker: no visible rust or wear.  |
| (11) chains: blackened and rusted.heavy duty metal chains, heavily rusted with a few missing links.   | (28) fireplace bellows: no visible wear or tear on the leather.  |
| (12) skeletons: hand painted in a metallic black with red highlights.skeleton props, intact with a few parts being chipped away due to age. | (29) cauldron: with a black iron handle.smooth, heavy cast iron with a black iron handle.              |
| (13) torches: antiqued metal torches, slightly worn with a few patches of rust.   | (30) potions: containing a mysterious black liquid.perfectly preserved and sealed.                     |
| (14) kraken statue: aged bronze with a glossy finish.   | (31) oils: fragrant and fresh.   |
| (15) tentacles: made of soft rubber and flexible enough to be manipulated into different shapes.flexible and smooth.                        | (32) bones: carefully arranged in the chest and slightly aged.   |
| (16) sea shells: curved sea shells, with natural colours and raised patterns.shiny and slightly transparent.                                | (33) chair: with a velvet cushion.black iron frame, with a velvet cushion slightly worn.               |
| (17) rocks: decorative rocks, with rough texture and dark grey colour.rough and textured.   | (34) skulls: painted black.smooth and glossy finish.   |

- (35) goatskin rug: dyed black and red.soft and supple, with no signs of wear.
- (36) crossbones: painted black.no signs of wear.
- (37) torch: sculpted with skull and bones, brass finish.smooth and glossy, with no signs of wear.
- (38) anvil: with a skull etched into it.heavy and solid, with a skull etched into it.
- (39) hammer: with an 8-inch handle and a 4-inch head.slightly worn handle and a clean head.
- (40) tongs: slight signs of rust on the flat jaw and a sturdy handle.
- (41) iron rods: clean and free from dents.
- (42) iron ingots: no signs of rust.
- (43) forge: with a charcoal-fired box and adjustable air intake and exhaust.well-maintained, with no signs of damage.

**2.15 A michelin star restaurant opened by a mad scientist (mad scientist restaurant)– Figure 26**

**Input Scene Description : a michelin star restaurant opened by a mad scientist** Semantic shopping list

- (1) tables: black steel with rivets.clean and glossy finish.
- (2) tablecloths: crisp and wrinkle free.
- (3) plates: smooth and glossy.
- (4) silverware: shiny and unscratched.
- (5) wine glasses: crisp and free of smudges.
- (6) petri dishes: clean and free of dust.
- (7) chairs: white plastic with black accents.unused and free of scratches.
- (8) table linen: crisp, clean and wrinkle free.
- (9) plates: spotless and shiny.
- (10) silverware: shining and polished.
- (11) test tubes: bright and clear.
- (12) test tube holders: with a copper finish.clean and without corrosion.
- (13) counter: stainless steel with led lighting.unused and free of scratches.
- (14) kitchenware: pans, baking trays, mixers, etc. with a steampunk design.sparkling, stainless steel with engraved designs.
- (15) bottles with potion: glass apothecary bottles with cork stoppers.sealed with a tight cork stopper.
- (16) cookbooks: slightly worn, yellowed pages with colorful illustrations.
- (17) scientist's lab coat: slightly worn, with ragged edges and loose threads.
- (18) test tubes: clean and free of cracks.
- (19) test tube rack: 8-test tube capacity.clean and clear, with no signs of corrosion or rust.
- (20) flasks: 50ml capacity, glass and rubber stoppers.glass containers with clear markings, with no chips or cracks.
- (21) chemical containers: graduated cylinders.no leaks, no signs of discoloration or damage.

- (22) dropper: 1ml capacity, with flexible bulb.no cracks or leaks, with a good seal.
- (23) beakers: clean and free of cracks.
- (24) chemical flasks: with graduated markingsclean and untouched.
- (25) beaker racks: powder coatedclean and in new condition.
- (26) safety goggles: adjustable strapsin perfect condition, free of scratches.
- (27) lab coats: three-button front closurefreshly laundered and wrinkle-free.
- (28) pipettes: graduated markings, with rubber tipssterile, free of dirt or dust.
- (29) bunsen burner: unused and in perfect working order.
- (30) flask: borosilicate glass.gleaming and sparkling, with no scratches.
- (31) feed tube: no kinks or bends.
- (32) gas valve: clean, no rust on the connections.
- (33) pressure gauge: no scratches, well calibrated.
- (34) ignition switch: free of dust and grime, working properly.
- (35) burner pipe: no rust, no dents, free of soot.
- (36) electrodes: unused and free of rust.
- (37) wires: insulated, 20 awgno visible signs of damage.
- (38) voltmeter: lcd displayno visible signs of damage.
- (39) ammeter: lcd displayno visible signs of damage.
- (40) switch: red and blackno visible signs of damage.
- (41) magnifying glass: plastic handleno visible scratches and smudges.
- (42) safety goggles: adjustable headbandno visible signs of wear and tear.

**2.16 A North Korean classroom (north korean classroom) – Figure 27**

**Input Scene Description : a north korean classroom** Semantic shopping list

- (1) desks: made of wood with black paint finish.smooth, dust-free surfaces.
- (2) pencils: sharpened and ready for use.
- (3) books: new and in great condition.
- (4) erasers: new, unused.
- (5) notebooks: brand new and unused.
- (6) chairs: made of wood with black paint finish.slight signs of wear on the edges.
- (7) student uniform: navy blue with red accents.neatly pressed and ironed.
- (8) pencils: black lead, white erasers on the top.newly sharpened.
- (9) books: navy blue with gold accents.minimal signs of wear.
- (10) notebooks: navy blue with red accents.neatly stacked and organized.
- (11) teacher's desk and chair: some signs of wear on the cushioning of the chair.

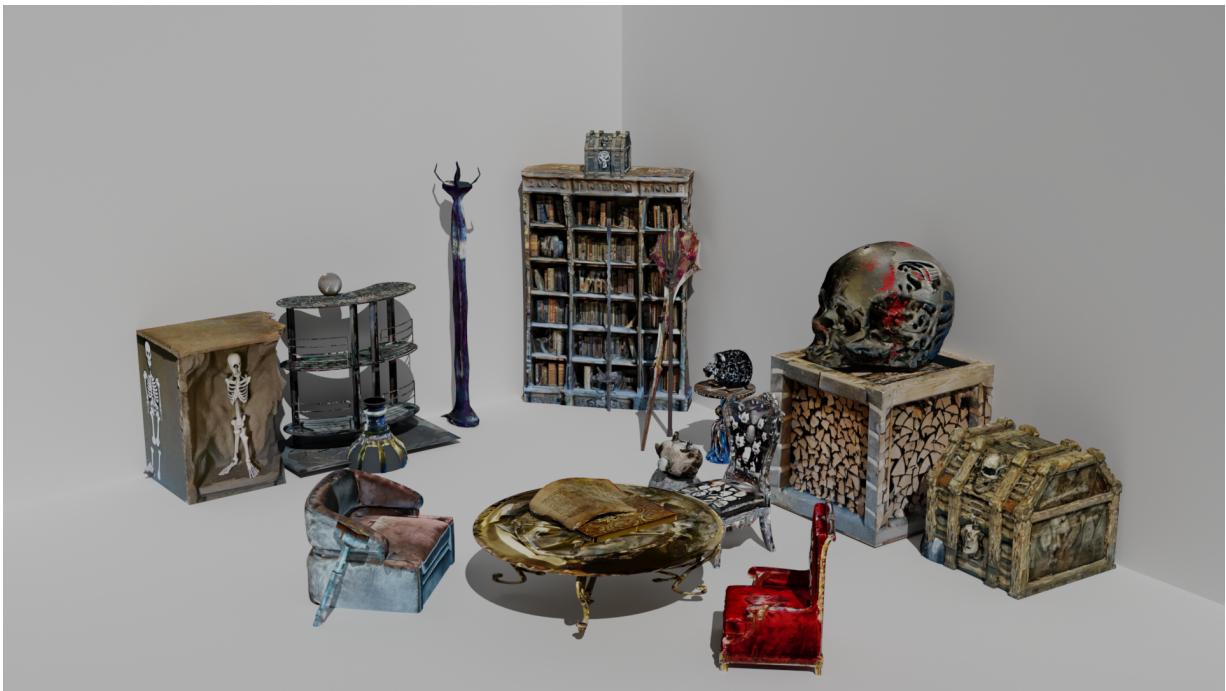


Fig. 25. Our output for “Hade’s man cave”



Fig. 26. Our output for “a michelin star restaurant opened by a mad scientist”

- (12) vase with flowers: with paper flowers.clean and well taken care of.
- (13) globe: with north korea highlighted in gold.smooth and glossy finish.
- (14) school textbooks: philosophy and political science textbooks.brand new and untouched.
- (15) blackboard: with a portrait of kim il sung in the center.spotless and polished.
- (16) chalk: in white and red.freshly sharpened.
- (17) bookshelf: metal frame with wooden shelves.no signs of rust or wear.
- (18) books: north korea's official state doctrine, printed on thick off-white paper with blue binding.crisp pages and spines, in new condition.
- (19) artifacts: made of bronze and gold-plated.shining bronze and gold plating, highly polished.
- (20) posters: printed on thick cardstock with vibrant colors.crisp and vibrant colors, free of creases.
- (21) flag: made of polyester and printed with bold colors.unfaded colors, free of wrinkles.

## 2.17 Headquarters of an occult cult (occult cult) – Figure 28

**Input Scene Description : headquarters of an occult cult**  
Semantic shopping list

- (1) altar: polished finish with no visible signs of wear.
- (2) ritual items: shiny and polished surface.
- (3) candelabra: black matte finish with five wax candles lit.
- (4) incense burner: polished silver surface with a hint of smoky scent.
- (5) ritual objects: smooth, dark surface with intricate symbols etched on them.
- (6) candles: flawless appearance, no signs of burning.
- (7) incense: 1 lb.fresh and aromatic.
- (8) incense burner: polished, clean and free of tarnish.
- (9) bell: 8 inches in diameter, ornate design on the handle.no scratches or dents.
- (10) dagger: sharp blade, no nicks.
- (11) robe: made of velvet fabric.undamaged and without stains.
- (12) chairs: no signs of wear or tear.
- (13) candelabras: black iron with red accents.slight tarnishing on the metal.
- (14) ritual tools: bronze and silver with intricate designs.slightly worn down edges.
- (15) mystic symbols: carved in onyx stone, painted with gold accents.crisp, sharp lines.
- (16) bookshelves: no visible signs of wear.
- (17) books: slightly worn and faded cover.
- (18) scrolls: slightly aged and fragile.
- (19) crucifix: intricate engravings, solid and well-crafted.
- (20) chalice: gleaming silver finish, ornate engravings.

## 2.18 A rustic backyard in the countryside (rustic backyard) – Figure 29

**Input Scene Description : a rustic backyard in the countryside**  
Semantic shopping list

- (1) patio furniture: dark brown with white cushionslightly faded from sun exposure.
- (2) umbrella: beige fabric, wooden pole and ribs.no visible wear or tear.
- (3) pillows: weather-resistant material with a rustic pattern.no visible wear or tear.
- (4) chairs: wooden material and natural finish.slight signs of fading on the wood.
- (5) cooler: canvas material and rustic pattern.no visible wear or tear.
- (6) sunscreen: spf 50 protection.unopened and not expired.
- (7) picnic table: dark brownlightly weathered from outdoor elements.
- (8) picnic blanket: cotton and red and black plaid.slight wear and tear but still intact.
- (9) plates: rustic style with floral pattern and earthy colors.minor scratches and chips but still intact.
- (10) silverware: no damage or wear and tear.
- (11) firepit: well maintained and clean.
- (12) firewood: 16-18 inches in length.rough texture, split into manageable pieces.
- (13) logs: 8-10 inches in diameter.bark peeled but still rough to the touch.
- (14) rocks: at least 12 inches in diameter.smooth, slightly weathered surfaces.
- (15) firestarter: eco-friendly material.lightweight, dry material.
- (16) matches: waterproof container.unused, undamaged boxes.
- (17) grill: stainless steel with black accentsslightly weathered from outdoor elements.
- (18) charcoal: 10lbs.packed in a sturdy box.
- (19) lighter fluid: 64oz.sealed tightly in a plastic container.
- (20) grill utensils: stainless steel with wooden handles.rustic appearance with slight signs of wear.
- (21) grilling food: freshly packaged.
- (22) hammock: blue and white stripesslightly faded from sun exposure.
- (23) blanket: cream and sky blue, with fringed hem.soft and fluffy, slightly faded from the sun.
- (24) pillow: plump and full of cozy filling.
- (25) books: with worn covers.slightly bent from use, with creased covers.
- (26) mug: in a natural ochre color.slightly worn from use, with a few scratches on the surface.
- (27) lantern: made of copper and glass.rusty and aged from being in the elements, with a few chips in the glass.
- (28) trees: about 5-6 feet tallthick, full foliage.
- (29) birdhouses: white-washed finish.smooth, worn surface with age-related discoloration.



Fig. 27. Our output for “a north korean classroom”

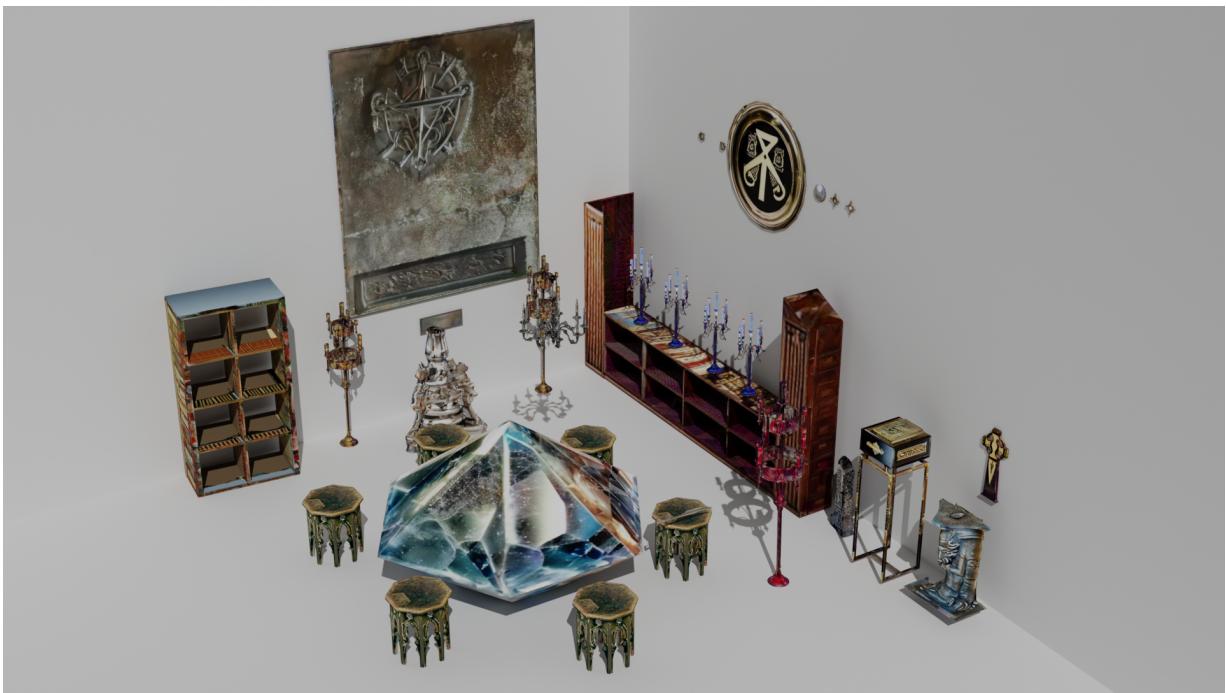


Fig. 28. Our output for “headquarters of an occult cult”

- (30) birdfeeders: white-washed finish.smooth, worn surface with age-related discolouration.
- (31) wildflowers: chosen for their color and texture.vibrant colors and lush texture.
- (32) potted plants: chosen for their hardiness and beauty.natural patina and signs of weathering.

**2.19 A church for strawberries (strawberry church) – Figure 30**

**Input Scene Description : a church for strawberries Semantic shopping list**

- (1) altar: smooth, polished finish.
- (2) candles: ivory white in color.bright and evenly burning flames.
- (3) cross: slightly tarnished, but still gleaming with an antique feel.
- (4) bible: pages appear crisp and clean.
- (5) flowerpots: glazed with freshly painted designs.
- (6) incense burner: shiny and polished with no signs of scratches.
- (7) pews: slight signs of wear on the arms.
- (8) cushions: embroidered with delicate golden strawberry patterns.crisp and clean, without any signs of wear or fading.
- (9) hymnals: with a strawberry-themed cover design.brand new with no signs of wear or damage.
- (10) candles: scented with a sweet strawberry fragrance.unlit, with no signs of use.
- (11) pulpit: intricate carvings and polished marble top in perfect condition.
- (12) bible: burgundy leather binding, gold lettering.brand new, no signs of wear.
- (13) microphone: wireless microphone with an adjustable stand.no signs of wear and fully functional.
- (14) flowers: fresh, vibrant petals.
- (15) choir books: brand new, no signs of wear.
- (16) candles: bright and vibrant, with no signs of smoke.
- (17) chandelier: all crystal drops intact, with no discolouration.
- (18) candles: unburned and well-preserved.
- (19) banners: crisp and clean edges.
- (20) candelabras: bright and lustrous finish.
- (21) incense burner: smooth and polished finish.
- (22) statue: intricate detailing in perfect condition.
- (23) candles: 6 inches tall.no wax drips, burning softly.
- (24) flowers: long stem.fresh, with long stems and large blooms.
- (25) incense burner: with a strawberry design.shiny, with a detailed strawberry design.
- (26) prayer beads: smooth to the touch, with a sturdy string.
- (27) bible: with a red cover and a white strawberry embossed on the front.new, with crisp pages and a glossy cover.

- (28) stained glass windows: bright colours with no fading or discolouration.
- (29) candles: lightly scented, with red flower petals around them.new, unscented, with red petals scattered around them.
- (30) banners: with the words 'love is sweet' written in gold lettering.crisp, with no signs of wear.
- (31) flowers: with green foliage and red ribbons.fresh, with vibrant colors and no signs of wilting.

**2.20 A busy street in downtown New York (busy New York street)– Figure 31**

**Input Scene Description : a busy street in downtown new york Semantic shopping list**

- (1) street lamps: white with gold accents.bright and shining.
- (2) street lamp post: black iron, with a height of 3 feet.unblemished and free from rust.
- (3) street lamp light: with 500 lumens and a white light.unblemished and free from dirt and dust.
- (4) street lamp wires: rated to withstand a voltage of 600 v.free from fraying and breaks in the insulation.
- (5) street lamp bulbs: with a warm white light and a power consumption of 7 watts.bright and free from flickering.
- (6) car: black with gold accents.in good condition, freshly washed.
- (7) car windows: no visible scratches or cracks.
- (8) car doors: no dents or discolouration.
- (9) car tires: no visible punctures.
- (10) license plate: no obvious signs of wear or tear.
- (11) benches: steel, lined with cushioning for comfort.clean and dust-free.
- (12) trash can: minimal signs of wear from pedestrian traffic.
- (13) fire hydrant: freshly painted yellow finish, with no rusting or damage.
- (14) street lights: bright and in good condition, without any dimming.
- (15) buildings: no visible signs of damage or deterioration.
- (16) street signs: reflective and weatherproof material.clear and legible.
- (17) street posts: obvious signs of rust, but otherwise in good condition.
- (18) street signs: clear lettering with no signs of wear.
- (19) trash bins: minor dents and scratches, but otherwise in good condition.
- (20) pigeons: hand-painted pigeons.brightly coloured, no signs of wear or fading.

We consider this example a failure case, and was reflected by the CLIP-D/S score for this scene in our main paper. This shows that this models still has many ways to go for outdoor scenes, a direction for future work.



Fig. 29. Our output for “a rustic backyard in the countryside”

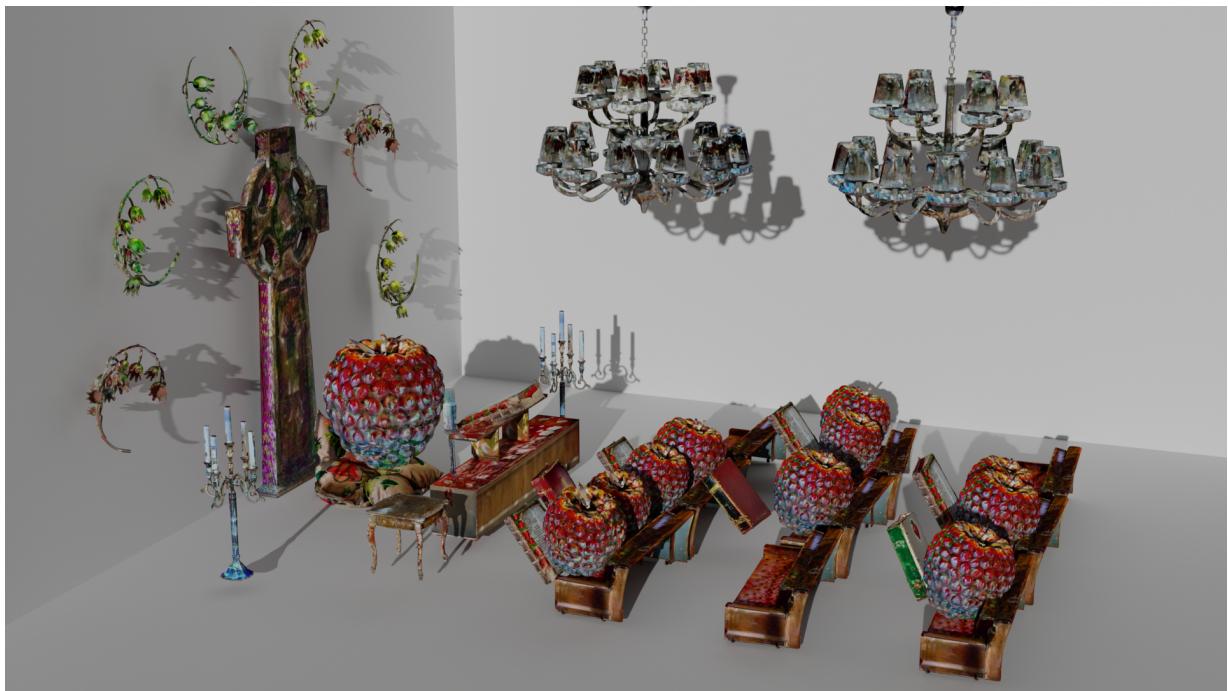


Fig. 30. Our output for “a church for strawberries”



Fig. 31. Our output for “a busy street in downtown new york”