

# Jiaqi(Jackie) Han

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## EDUCATION

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### University of Utah

Salt Lake City, USA

*Master of Entertainment Arts & Engineering(Technical Art Track) GPA(3.9/4.0)*

Aug 2024–Now

- **Technical Art Direction:** Environmental art, procedural content generation, game demo development, rapid prototype, open world asset creation
- Trailers: <https://www.jackiehan0321.com/technicalarts>

**Stylized Procedural Asset:** Utilized Houdini's Heightfield nodes to generate terrain in UE, scatter vegetation and rocks, and create architectural HDAs using Houdini and JSON. Implemented building generation in Houdini based on white-boxing using the Wave Function Collapse algorithm. Created stylized architectural materials with Substance Designer and performed batch UV unwrapping and alignment in Houdini.

**Realistic Environment:** Captured snow footprint data with RenderTarget and used UE material displacement nodes to render snow coverage. Achieved depth effects for ice surfaces using parallax nodes. Created a screen frosting and blood effect with post-process materials. Developed a blizzard moving along a Spline curve with Niagara particles and bridged Niagara effects via the Houdini Plugin. Produced assets like rocks, icicles, and sculptures using Houdini's SOP and VOP modules. Created high-poly and low-poly models with material baking and mapping in Houdini. Simulated ice-breaking animations with Houdini's RBD Fracture. Created smoke and fire effects with Houdini's Pyro nodes and imported VDB volume data into UE.

**3D Modeling and Rigging:** Sculpted biological models in ZBrush, organized hierarchical skeleton and naming in Houdini, painted skin weights in Maya, and performed manual rigging and controller creation. Completed animation baking to skeletons and imported the animations into UE.

### Harvard University Graduate School of Design

Cambridge, USA

*Master of Architecture in Urban Design*

Sept 2019–May 2021

- **Research Direction:** Urban design, quantitative analysis of urban economy, architectural design, real estate investment, critical historic building preservation and renewal

### South China University of Technology

Guangzhou, CN

*Bachelor of Architecture GPA(3.88/4.0)*

Sept 2014–Jun 2019

- Academic Projects:<https://www.jackiehan0321.com/architectures>

## GAME PROJECTS

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- Demos: <https://www.jackiehan0321.com/games>

➤ Echoes of the Namesless(Horror Escape VR game, UE)	Nov-Dec 2024
➤ Pop City (Sim Game, Unity, Coursework, published)	Sept 2024
➤ RoboFlip (2D Platformer Game, Unity, Coursework, published)	Aug 2024
➤ Sun Breaker (ACT Game, Finalist, Netease Games Student Producer Competition, Netease Y3 Editor)	Jul 2024
➤ ENVELOPE, video game (Puzzle Game,UE5, in development)	Oct 2023-Now
➤ The End of Two Dimensions, video game (Puzzle Game, Unity, published)	Sept 2023 - Oct 2023
➤ La République des Engrenages, video game (Tower Defense Game, Unity,published)	Jul 2023 - Sept 2023
➤ Walking on the Shadow Edge, video game (Puzzle Game, Unity,published)	Apr 2023 - Jul 2023

**Technical Artist:** implemented PBR materials in Unreal Engine using triplanar projection, created flame-burning vertex animations based on HUD sequences and world position offset, and developed small-scale liquid flow materials using Houdini Flip nodes and VAT (Vertex Animation Texture). Completed character motion capture and performed as an NPC, cleaned motion capture data in MotionBuilder, adjusted skeletons and refined animations in Maya, and developed a comic book-style shader in Unity. Created the protagonist and NPCs using MetaHuman, scripted basic interaction Blueprints, and utilized Live Link Face for facial capture, applying the data to animation sequences.

**3D Artist:** modeled assets (furniture, props) based on concept art using ZBrush, Houdini, and Blender. Created material textures (stone bricks, mud, wood) with Substance Designer and built reusable master material instances in UE. Designed blood splatter and smear decals in Substance Painter.