Kaedim: The Human-in-the-Loop 3D Asset Generation Platform

1. Executive Summary: Solving the "Last Mile" of 3D Generation

Kaedim distinguishes itself in the crowded generative AI market by focusing specifically on **production-ready** 3D asset creation. unlike competitors that prioritize speed (generating meshes in seconds) often at the cost of topology quality, Kaedim utilizes a **Human-in-the-Loop (HITL)** architecture. This hybrid model combines machine learning algorithms with a global team of human artists who quality-check and refine the output.

The platform creates 3D models from 2D inputs (images, sketches, or concept art) and is specifically engineered to integrate into professional game development and VFX pipelines. Its primary value proposition is the generation of clean, quad-based topology, automatic UV unwrapping, and "game-ready" optimization—tasks that are traditionally labor-intensive for human modelers.

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2. Core Technology: The Hybrid AI/Human Engine

The central controversy and capability of Kaedim lies in its operational mechanics. While marketed as an AI tool, it openly acknowledges the use of human "quality control engineers" to bridge the gap between current AI capabilities and professional standards.

2.1 The Process

1. **AI Reconstruction:** Upon uploading a 2D image, proprietary machine learning algorithms generate an initial 3D reconstruction.
2. **Human Refinement:** A human artist reviews the output to correct geometry errors, ensure logical edge flow (topology), and fix artifacts that pure AI models often leave behind.
3. **Delivery:** The user receives a model that is "watertight" and free of non-manifold geometry, typically within 15 minutes to 24 hours depending on the complexity and priority settings.

2.2 Addressing the Controversy

This approach has sparked debate within the tech community, with some critics on platforms like Reddit initially accusing the company of disguising manual labor as AI. Kaedim has since clarified its methodology, framing the human component as a necessary training loop for their

algorithms and a quality assurance step that purely automated alternatives like Meshy or Tripo cannot yet match.

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3. Workflow and Input Engineering

Unlike "Text-to-3D" tools that generate assets from prompts, Kaedim is primarily an **Image-to-3D** platform. The quality of the output is deterministically linked to the quality of the visual input.

3.1 Input Guidelines

To achieve optimal results, Kaedim requires specific "input engineering":

- **Orthographic Views:** The ideal input is a "character turnaround" or schematic view (front, side, back) with no perspective distortion.
- **Background:** Images must have a clear, white, or monochrome background to assist the AI in silhouette detection.
- **Single Object:** Until recently, the system was limited to single objects. Complex assets (e.g., a character holding a weapon) often need to be separated into distinct uploads to prevent the AI from fusing them into a single mesh.[1]

3.2 The Game-Ready Pipeline

Kaedim offers a specialized "Game-Ready" pipeline that includes steps beyond simple geometry generation:

- **High Poly to Low Poly:** The system can generate a high-fidelity model and then bake details onto a lower-poly optimized version suitable for real-time engines.
- **Automatic Texturing:** It provides PBR (Physically Based Rendering) texture generation, including Albedo, Normal, and Roughness maps.
- **LoDs (Levels of Detail):** Users can request automatic generation of LoDs, creating multiple versions of the asset at different polygon counts for optimization in game engines like Unity or Unreal.

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4. Competitive Landscape and Pricing

Kaedim positions itself as a premium, enterprise-focused tool rather than a consumer toy.

4.1 Comparison Matrix

Feature	Kaedim	Meshy / Tripo	Luma (Genie)

Primary Method	Hybrid (AI + Human)	Fully Automated AI	NeRF / Transformer
Speed	15 mins – 24 hours	15 – 60 seconds	10 – 60 seconds
Topology	Clean Quads (Editable)	Often Triangulated/Messy	High Poly/Blobby
Best Use Case	Final Game Assets	Prototyping / Background	Rapid Concepting
Cost	High ($150-$300+/mo)	Low (Freemium/$16/mo)	Freemium

4.2 Pricing Structure

Kaedim operates on a credit-based subscription model, which is significantly more expensive than its fully automated competitors.

- **Plans:** Pricing has historically started around **$150/month** for a "Starter" or "Indie" tier, scaling up to **$1,000+/month** for Studio/Enterprise plans.
- **Credit System:** Users pay "credits" per generation. Complex "Game-Ready" assets consume more credits than standard "Prototype" generations.
- **Enterprise Focus:** The high cost reflects the manual labor involved and targets studios looking to reduce outsourcing costs rather than individual hobbyists.

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5. Technical Limitations and Future Roadmap

5.1 Current Limitations

- **Generation Time:** Because of the human-in-the-loop component, Kaedim cannot offer the "instant" gratification of tools like Meshy.
- **Input Sensitivity:** Blurry images, complex lighting, or perspective shots often result in "hallucinated" geometry or rejection by the system.

5.2 Roadmap (2025-2026)

Kaedim's development roadmap focuses on reducing the reliance on human intervention while maintaining quality:

- **Scene Generation:** A new feature allows for the upload of full scenes containing multiple

objects, which the system identifies and generates in their correct spatial positions.

- **Automatic Texturing & Rigging:** Enhanced support for automatic rigging is in development, aiming to deliver assets that are essentially "drag-and-drop" ready for animation.
- **Integration:** Continued development of plugins for Blender, Unreal Engine 5, and Unity to streamline the import process.

6. Conclusion

Kaedim is currently the most viable solution for professional developers who need **edit-ready topology** without modeling from scratch. While slower and more expensive than fully autonomous AI generators, its hybrid approach solves the "usability" problem that plagues most generative 3D models, making it a functional tool for production pipelines rather than just a concepting novelty.

Works cited

1. Input Guidelines | Kaedim, accessed December 20, 2025, https://docs.kaedim3d.com/creating-assets/input-guidelines
2. How to convert a sketch to 3D model with Kaedim - Medium, accessed December 20, 2025, https://medium.com/@kaedim/how-to-convert-a-sketch-into-a-3d-model-with-kaedim-7a7500e5d605