

AI Meets Design: IIT?R Launches Text?to?Sketch Fashion System

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Researchers at the **Indian Institute of Technology Roorkee (IIT?R)** have developed a cutting?edge artificial intelligence system capable of creating detailed fashion sketches from written descriptions — a first in India that bridges the gap between design imagination and visual output.

Traditional AI tools in the fashion sector have focused on using existing photographs and catalog images for tasks such as online retail, visual search, and product recommendations. These systems, while useful, fall short of replicating how fashion designers think — starting with words, ideas, and conceptual descriptions before producing a hand?drawn sketch.

The new system developed by IIT?R researchers allows designers and creators to input textual prompts — ranging from broad concepts to detailed style language — and generates corresponding fashion illustrations. This approach mirrors traditional design workflows, where clothing concepts first take shape on paper based on descriptive vision rather than images.

At the core of the innovation is a specialized dataset and model framework tailored for fashion description interpretation. This enables the AI to understand complex fashion terminologies such as fabric types, silhouettes, textures, and stylistic details, and translate them into accurate visual representations. Designers can therefore visualize ideas early in the creative process, saving time and enhancing collaboration between human creativity and machine assistance.

IIT Roorkee's breakthrough is expected to influence not only the fashion industry but also the broader field of creative design tools powered by artificial intelligence — introducing a new way to harness generative technology in artistic domains.

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