

# **ImgGen: Advanced Text-to-Image Generation**

**Leveraging State-of-the-Art AI for Text-to-Image Generation**



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# Introduction to ImgGen

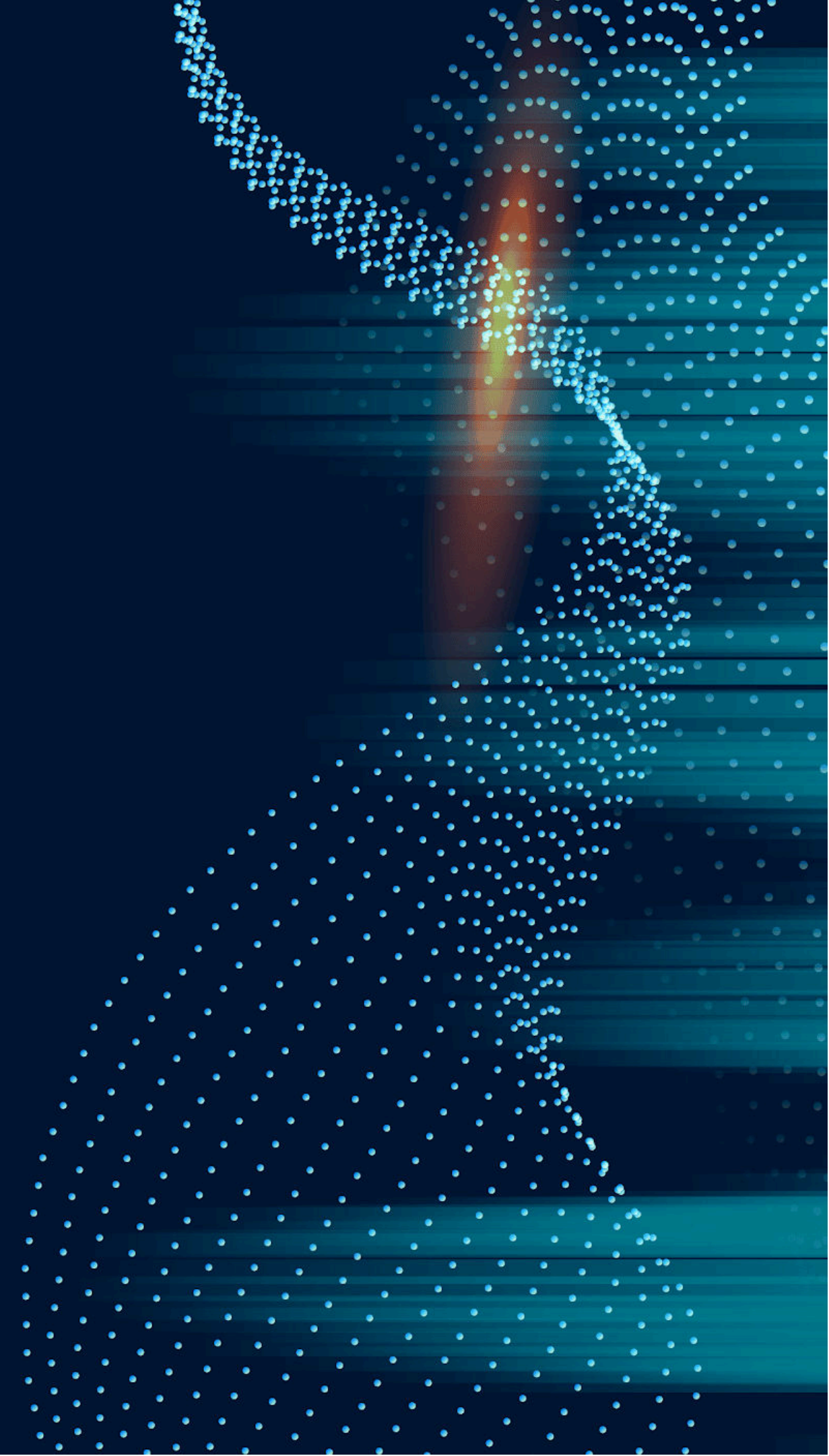
- ImgGen is a Streamlit application that generates images from text descriptions.
- Powered by DeepInfra API using StabilityAI SDXL Turbo model.
- All parameters and generated images are logged via MLflow for easy tracking.
- Customizable features for user control over image generation.



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# Key Features

- Generate images from any text input.
- Control image parameters:
  - Width and height.
  - Inference steps (detail and quality control).
  - Guidance scale (adherence to the text prompt).
  - Generate multiple images at once.
- MLflow integration for automatic experiment logging.



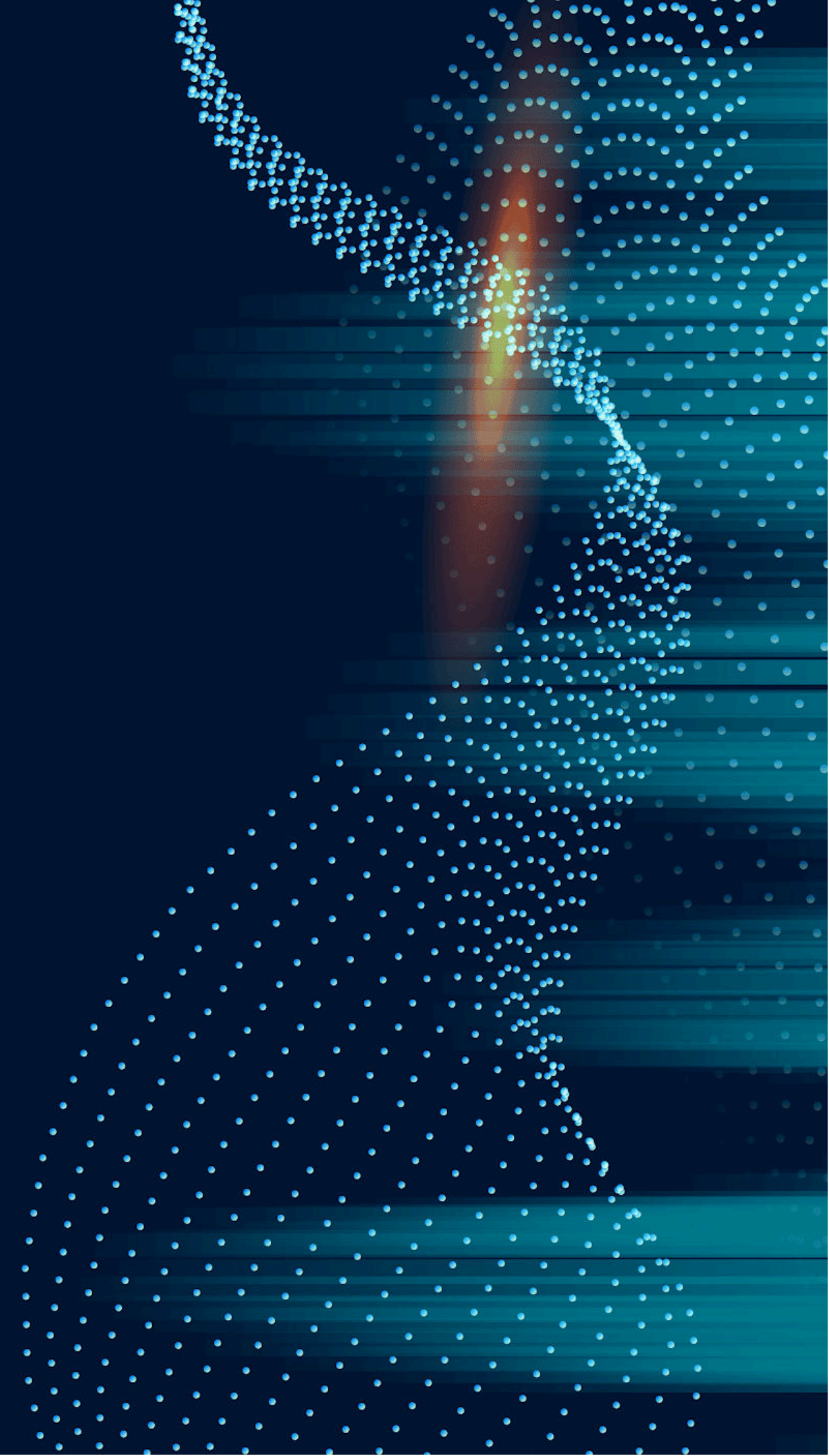


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# StabilityAI SDXL Turbo

- The SDXL Turbo model, developed by Stability AI
- StabilityAI SDXL Turbo model via DeepInfra API.
- Optimized for fast and high-quality text-to-image generation.
- Uses advanced diffusion techniques for accurate image rendering.

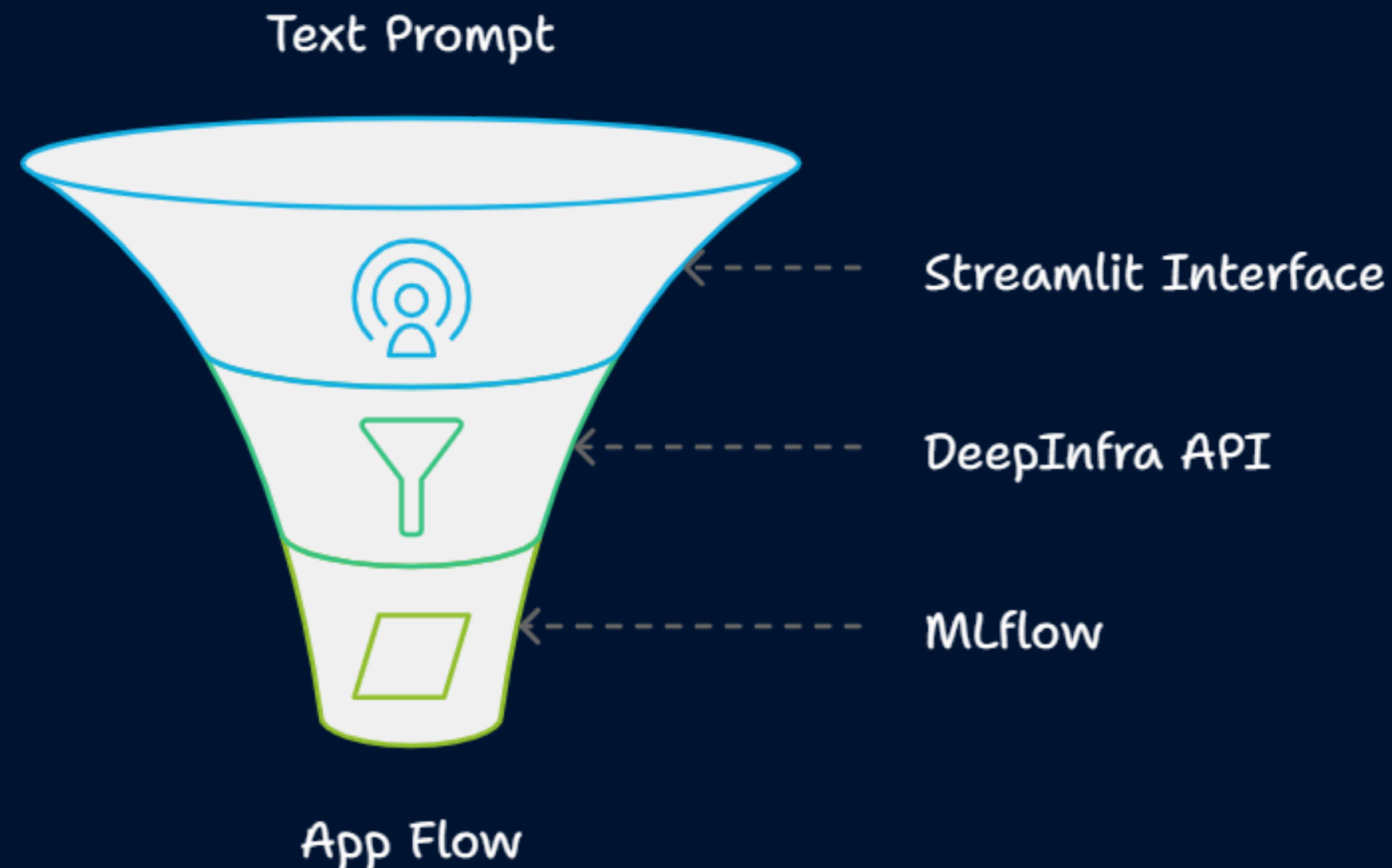
Model Link: <https://deepinfra.com/stabilityai/sd-xl-turbo>



# ImgGen Architecture

Show a simple architecture flow:

- User interacts via Streamlit interface.
- DeepInfra API processes the text-to-image generation.
- MLflow logs experiments and generated images.







## How ImgGen Works (Text2Image Generation)

- Enter a text description.
- Adjust image parameters (size, steps, scale, number of images).
- Click "Generate Image(s)".
- Images are generated by DeepInfra API.
- Results are displayed, and MLflow logs the experiment.



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# Outputs Examples

**Prompt : golden eagle**



**Prompt : home design with combined  
between Egyptian ancient and  
modern technology**

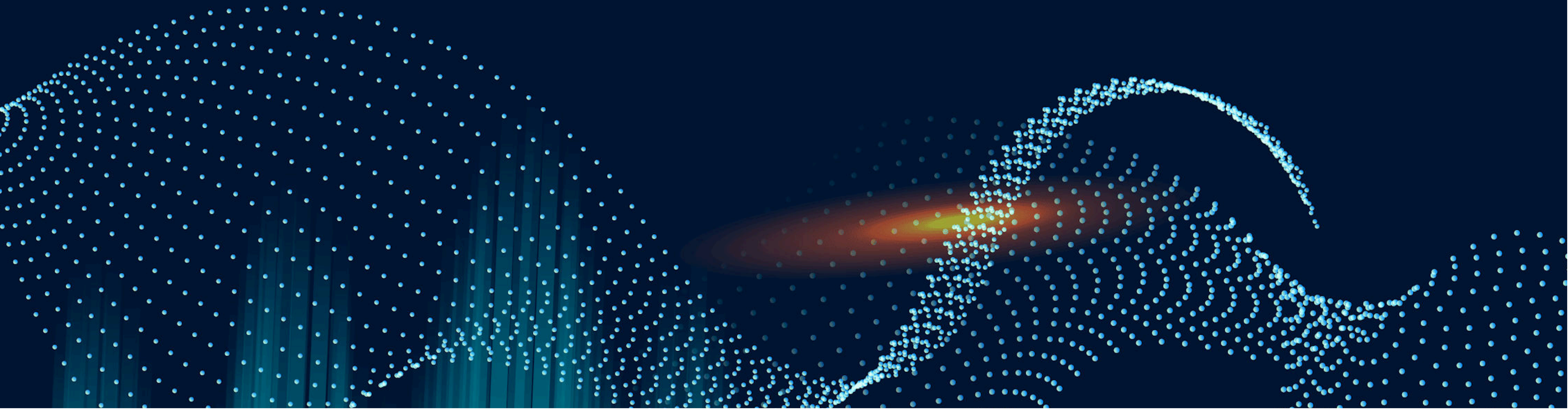




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# ImgGen Demo

<https://drive.google.com/file/d/1lO6my88c7nZaXa48eFcswcTX5203lOPq>





# Thanks!

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