

AI Image Generation Roadmap

1. Advanced Prompt Engineering (Creative Control)

- Learn prompt structures: realistic vs. cartoon styles
- Use styles like 'in the style of Van Gogh'
- Adjust composition: 'cinematic lighting, ultra-detailed, 4K'
- Explore tools like Lexica.art for real prompt examples

2. Inpainting / Outpainting (Image Editing with AI)

- Modify parts of images (e.g., background, clothes)
- Extend image beyond original size
- Try diffusers inpainting pipeline or Automatic1111 WebUI

3. Train Your Own Model (DreamBooth / LoRA / Custom Concepts)

- Train models with your face, object, or art style
- Use DreamBooth or LoRA fine-tuning
- Tools: DreamBooth Colab, kohya-ss/sd-scripts

4. Use Web UIs for More Control

- Try AUTOMATIC1111 WebUI or InvokeAI
- Features: preview, ControlNet, upscaling, filters

5. Use ControlNet for Precision Image Generation

- Add control: pose, sketch, depth, canny edges
- Use Illyasviel/ControlNet or Colab notebooks

6. Explore Other Open Source Models

- Kandinsky 2.2: high-quality art
- SDXL: photorealistic images
- Craiyon: meme-style
- DeepFloyd IF: multi-stage generation

7. Convert Text-to-Video or Animate Images

- Text-to-video: Modelscope Text2Video
- Animate images: Ebsynth, Deformable Attention

8. Integrate into Apps / APIs

- Build apps with Streamlit or Gradio
- Host models on Hugging Face Spaces
- Add frontend prompt input, download button