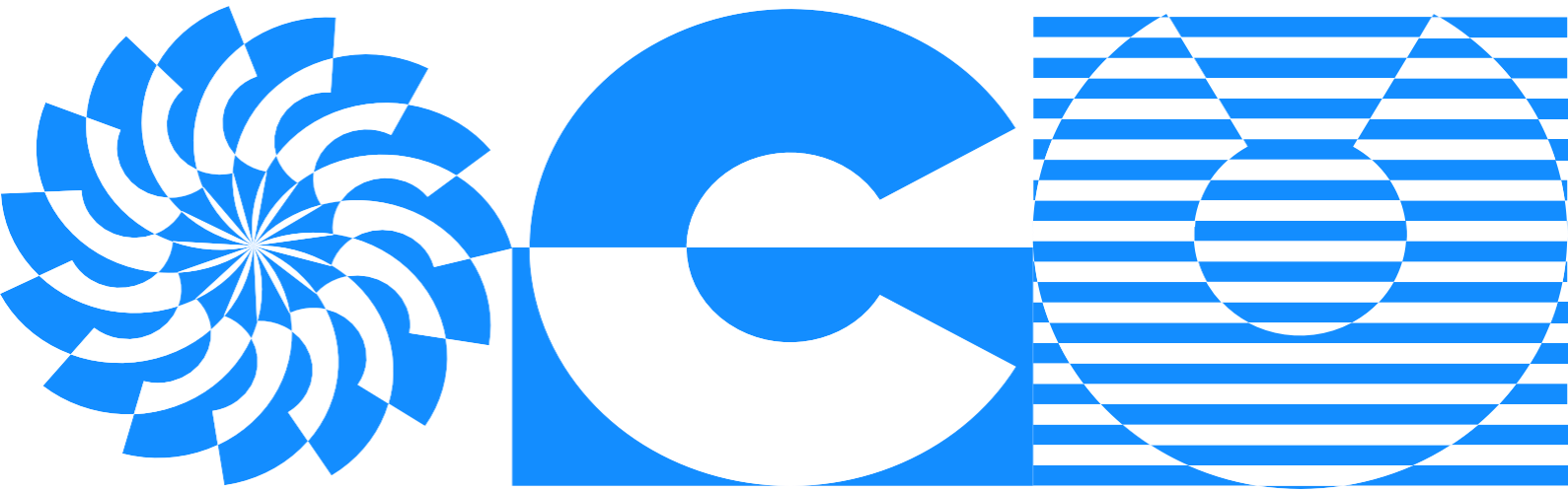


A place where legacy creates future.



GENAI

# Mastering Generative AI for Art

Detailed Curriculum



**OpenCV  
University**



# AI ART GENERATION FOR EVERYONE

## Index

Module 1

### **Introduction to Generative AI**

|

Module 2

### **Generative AI with OpenAI DALLE Qwen**

|

Module 3

### **Generating Images with Midjourney**

|

Module 4

### **FREE GPU Credits from RunPod**

|

Module 5

### **Generating Images with Stable Diffusion**

|

Module 6

### **Stable Diffusion 3.5**

|

Module 7

### **Accelerated Image Generation with NVIDIA SANA**

|

Module 8

### **Diving Deeper into Stable Diffusion**

|

Module 9

### **Advanced Image Editing Techniques**



# 1 Introduction to Generative AI

## 1.1 Introduction to Generative AI

- 1.1.1 What is Generative AI
- 1.1.2 Generative AI Landscape
- 1.1.3 Evolution of Generative AI
- 1.1.4 Ethics and Guidelines

QUIZ 1

# 2 Generative AI with OpenAI DALLE

## 2.1 OpenAI Intro

- 2.1.1 OpenAI Innovations

## 2.2 DALLE2 and ChatGPT

- 2.2.1 Introduction to DALLE2
- 2.2.2 Image Generation using DALLE2
- 2.2.3 ChatGPT Demo

## 2.3 Introduction to PlayGroundAI

- 2.3.1 Working With PlayGroundAI

## 2.4 Generating Images with Qwen Image Edit

- 2.4.1 Qwen Image Edit

QUIZ 2



## **3 Generating Images with Midjourney**

### **3.1 Generating Images with Midjourney**

- 3.1.1 Introduction to Midjourney
- 3.1.2 Setting up Midjourney Discord
- 3.1.3 Understanding Midjourney parameters for better prompting
- 3.1.4 Blending multiple images
- 3.1.5 Advanced Feature in Midjourney
- 3.1.6 Midjourney Updates

### **3.2 Midjourney Alternative**

- 3.2.1 Midjourney Alternative

QUIZ 3

## **4 FREE GPU Credits from RunPod**

### **4.1 FREE GPU Credits from RunPod**

- 4.1.1 What is RunPod
- 4.1.2 Redeem your RunPod Coupon

## **5 Generating Images with Stable Diffusion**

### **5.1 Introduction to Stable Diffusion**

- 5.1.1 Introduction to Stable Diffusion
- 5.1.2 Demystifying Stable Diffusion Model
- 5.1.3 Getting Started with Stable Diffusion

### **5.2 Generating Images with DreamStudio**

- 5.2.1 Generating Images using DreamStudio
- 5.2.2 Editing Images using DreamStudio

### **5.3 Setting up the Automatic1111 Stable Diffusion WebUI**

- 5.3.1 What is Stable Diffusion WebUI



5.3.2 Using Automatic1111 WebUI on RunPod

5.3.3 Using Automatic1111 WebUI on Kaggle

## **5.4 Generating Images with Stable Diffusion WebUI**

5.4.1 Generating Images with Stable Diffusion WebUI

5.4.2 Prompt Engineering with Stable Diffusion

### QUIZ 4

## **6 Stable Diffusion 3.5**

### **6.1 Dataset Preparation for Stable Diffusion Using Google Gemini**

6.1.1 Image Generation Using SD 3.5

## **7 Accelerated Image Generation with NVIDIA SANA**

### **7.1 Sana and Sana Sprint**

7.1.1 Image Generation Using Sana

## **8 Diving Deeper into Stable Diffusion**

### **8.1 Advanced Controls in SD WebUI**

8.1.1 Analyzing Prompt with Prompt Matrix in WebUI

8.1.2 Prompt Strength and Weights

8.1.3 Prompt Editing and Blending

8.1.4 Using the XYZ Plots in Stable Diffusion WebUI

### **8.2 Editing Images using img2img**

8.2.1 Image Editing with img2img in WebUI

8.2.2 Image Inpainting in WebUI: Part-I

8.2.3 Image Inpainting in WebUI: Part-II

8.2.4 Image Editing with img2img Sketch

8.2.5 Image Editing with Inpaint Sketch



### **8.3 Where to find Models**

8.3.1 Using fine-tuned models from CIVITAI

### **8.4 Using Extensions with WebUI**

8.4.1 How to install extensions

8.4.2 WebUI Extensions – Part-II

QUIZ 5

## **9 Advanced Image Editing Techniques**

### **9.1 Controlled Editing with InstructPix2Pix**

9.1.1 InstructPix2Pix Introduction & Setup

9.1.2 InstructPix2Pix Demo – Part 1 (Virtual Try-on)

9.1.3 InstructPix2Pix Demo – Part 2

### **9.2 ControlNet: Controlling Stable Diffusion Models**

9.2.1 Introduction to ControlNet

9.2.2 ControlNet Installation & Setup

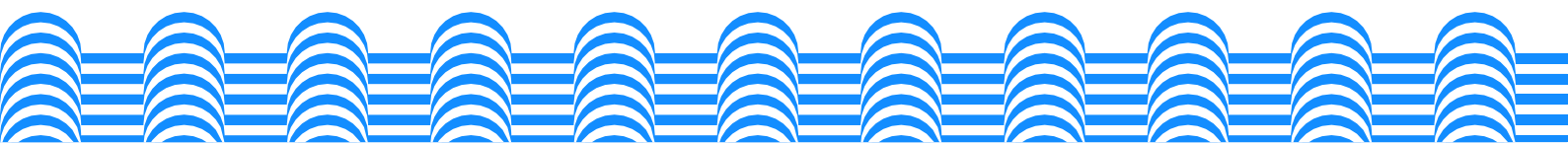
9.2.3 Generating Image Variations with ControlNet Models

9.2.4 ControlNet OpenPose

### **9.3 UpScaling Images like a Pro**

9.3.1 UpScaling Images with Ultimate SD UpScale + ControlNet

QUIZ 6



# ADVANCED AI ART GENERATION

## Index

Module 1

**Stable Diffusion WebUI Practical Tips for Efficient Workflow**

|

Module 2

**Controlled Image Editing**

|

Module 3

**Textual Inversion**

|

Module 4

**LoRA**

|

Module 5

**Creating videos using Prompt**

|

Module 6

**Prompt Generation using ChatGPT**

|

Module 7

**Image Generation using FLUX**



# 1 DreamBooth

## 1.1 Fine-Tuning SD Models with DreamBooth

- 1.1.1 Introduction to DreamBooth
- 1.1.2 RunPod Configuration for DreamBooth
- 1.1.3 Fine-tuning SD with DreamBooth
- 1.1.4 Fine-tuning SD with DreamBooth + Captions

QUIZ 1

# 2 Stable Diffusion WebUI Practical Tips for Efficient Workflow

## 2.1 Stable Diffusion WebUI Installation

- 2.1.1 Stable Diffusion WebUI MacOS Installation
- 2.1.2 Stable Diffusion WebUI Windows Installation
- 2.1.3 Stable Diffusion WebUI Linux Installation

## 2.2 How to Recreate Existing Images Using Stable Diffusion

- 2.2.1 How to Recreate Existing Images Using Stable Diffusion

## 2.3 Stable Diffusion WebUI Key Settings

- 2.3.1 Stable Diffusion WebUI Key Settings

## 2.4 Understanding XYZ Plots in Stable Diffusion WebUI

- 2.4.1 Understanding XYZ Plots in Stable Diffusion WebUI

## 2.5 Understanding Variational Strength Feature in Stable Diffusion

- 2.5.1 Understanding Variational Strength Feature in Stable Diffusion

QUIZ 2



## 3 **Controlled Image Editing**

### 3.1 **Asset placement using Paint By Example**

- 3.1.1 Paint By Example
- 3.1.2 Setup Paint By Example
- 3.1.3 Tips and Tricks for Editing with PBE

### 3.2 **Creating Deepfakes using DeepFaceLab**

- 3.2.1 Introduction to DeepFakes
- 3.2.2 Setup Virtual Workspace on RunPod
- 3.2.3 Prepare DeepFaceLab for Training
- 3.2.4 Training on Your Own Data
- 3.2.5 Creating Training Data for Deepfakes
- 3.2.6 Using the Trained Model
- 3.2.7 Tips and Tricks for better Results

QUIZ 3

## 4 **Textual Inversion**

### 4.1 **Extending SD with Embeddings**

- 4.1.1 Stable Diffusion Architecture
- 4.1.2 Textual Inversion Architecture
- 4.1.3 Using Pretrained Embeddings Part-I
- 4.1.4 Using Pretrained Embeddings Part-II
- 4.1.5 Training Custom Style Embeddings
- 4.1.6 Evaluating Custom Style Embeddings
- 4.1.7 Using Custom Style Embeddings

QUIZ 4



## 5 **LoRA**

### 5.1 **Fine-Tuning SD Models with LoRA**

- 5.1.1 Kohya Installation on RunPod
- 5.1.2 LoRA Training in Kohya GUI
- 5.1.3 LoRA Training & Execution
- 5.1.4 Using LoRA Models

QUIZ 5

## 6 **Creating videos using Prompt**

### 6.1 **Introduction to Video Generation**

- 6.1.1 Introduction to Video Generation

### 6.2 **An Overview of TEXT2VIDEO Methods**

- 6.2.1 An Overview of TEXT2VIDEO Methods

### 6.3 **IMG2VIDEO using RunwayML GEN-2**

- 6.3.1 IMG2VIDEO using RunwayML GEN-2

### 6.4 **Methods to perform Video2Video**

- 6.4.1 Methods to perform Video2Video

### 6.5 **MOV2MOV using ControlNet - using Automatic 1111**

- 6.5.1 MOV2MOV using ControlNet – using Automatic 1111

QUIZ 6

## 7 **Prompt Generation using ChatGPT**

### 7.1 **Training ChatGPT for Prompt Generation**

- 7.1.1 Training ChatGPT for Prompt Generation



## 8 **Image Generation using FLUX**

### 8.1 **FLUX Image Generation**

#### 8.1.1 FLUX Schnell Notebook

