Foundations of AI and Language Models

What to learn

How LLMs work & process language

Prompt Engineering to communicate with LLMs

Integrations with external tools

Tools to explore

GPT-4 (OpenAI Playground)

Hugging Face Hub

Playground AI

OpenAI API

Projects to explore

Multiple prompting techniques on Open AI Playground

> Hugging Face to test pre-trained models

Integrating Open AI API with Postman

Advanced Prompting, Retrieval, and Fine-Tuning

What to learn

Master advanced prompting techniques and RAG

Fine-tuning AI models to improve their performance

Teach AI to retrieve relevant information from large datasets or documents

Tools to explore

Hugging Face Auto Train

Pinecone

OpenAI Embedding API

Llama Index

Projects to explore

Fine-tune a model on Hugging Face AutoTrain to handle tasks..

Use Pinecone to build a search engine for documents

Experiment with retrievalaugmented generation (RAG)

Learn Image & Video Creation

What to learn

Using tools like DALL-E & Stable Diffusion

Manipulating images using img2img

Style transfer techniques

AI for voice & video gen

Tools to explore

Stable Diffusion XL

ComfyUI

ControlNet & IPadapters

Dreambooth & Lora

ESRGAN

Pix2Pix & CycleGAN

NeRFs & Gaussian

Splatting

DiffSinger

RunwayML

Projects to explore

Fine-tune a model on Hugging Face AutoTrain to handle tasks..

Use Pinecone to build a search engine for documents

Experiment with retrievalaugmented generation (RAG)

Learn how to automate tasks using AI Agents & No-Code Tools

What to learn

Building AI Agents to automate tasks like managing emails, processing files, handling CS support etc

Develop complex agents to automate workflows

Tools to explore

Relevance AI

LangChain

n8n

Projects to explore

Create workflows that automate tasks like sending emails, notifications etc

Use Langchain to build agents that can perform advanced tasks & process data

& Relevant AI to automate complex processes

Learn how to build AI Powered Applications

What to learn

Building AI powered applications like chatbots, Image bots etc

Launching applications & managing security, authentication & data handling

Tools to explore

Cursor AI

V0 (Vercel)

Bubble

Supabase

Next-auth

Projects to explore

Build apps like chatbots, data processors etc using Cursor AI

Add Data Management features using Supabase

Deploy your app using V0 (Vercel)

Build & Deploy your own AI Solutions

Build a full fledged Super Agent

Build an AI Powered app