

# 90-Day GenAI Engineer Curriculum (Notion-Ready)

**Profile:** MCA graduate | Python-ready | 4-year career gap (upskilling focus)

**Daily Commitment:** ~8 hours/day

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## How to Use This in Notion

- Create one page = **1 day** (duplicate template)
  - Tick checklists as you progress
  - Add GitHub links under **Daily Output**
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## Daily Template (Duplicate This)

### Day X - Title

- Goal:
  - Learn (Links):
  - Hands-on:
  - Project Work:
  - Notes:
  - Daily Output (GitHub/Notes):
  - Time Spent:
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## PHASE 1 - ML + DATA FOUNDATION (Day 1-12)

### Day 1 - AI, ML, DL, GenAI Overview

- Learn:
  - Krish Naik – AI vs ML vs DL vs GenAI (YouTube)
  - Towards Data Science – AI vs ML article
- Hands-on:
  - Setup venv, GitHub repo structure
- Output:
  - README: AI career roadmap

## **Day 2 - NumPy for AI**

- Learn:
  - Codebasics – NumPy tutorial
  - NumPy official docs
- Hands-on:
  - Vectorized operations notebook

## **Day 3 - Pandas for AI**

- Learn:
  - Corey Schafer – Pandas
  - Kaggle Learn: Pandas
- Hands-on:
  - Clean real CSV dataset

## **Day 4 - Data Visualization**

- Learn:
  - Corey Schafer – Matplotlib
  - Kaggle Visualization
- Hands-on:
  - Plot insights

## **Day 5 - Statistics for ML**

- Learn:
  - StatQuest – Mean, Std, Bias-Variance
- Hands-on:
  - Stats revision notebook

## **Day 6 - ML Algorithms Overview**

- Learn:
  - Krish Naik – ML algorithms
- Hands-on:
  - Algorithm selection notes

## **Day 7 - ML Pipelines**

- Learn:
  - Codebasics – sklearn pipeline

- Hands-on:
  - Train-test-evaluate pipeline

## **Day 8 - Feature Engineering**

- Learn:
  - Krish Naik – Feature Engineering
  - Kaggle Feature Engineering

## **Day 9 - Model Evaluation**

- Learn:
  - StatQuest – Precision/Recall/F1

## **Day 10 - Hyperparameter Tuning**

- Learn:
  - Krish Naik – GridSearchCV

## **Day 11 - Explainable AI**

- Learn:
  - Codebasics – SHAP

## **Day 12 - PROJECT 1**

### **AI Resume Screening System**

- Dataset: Kaggle resumes
  - Output: GitHub repo + README
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## **PHASE 2 - NLP + DEEP LEARNING (Day 13-25)**

### **Day 13 - NLP Basics**

- Learn:
  - Krish Naik – NLP playlist

### **Day 14 - TF-IDF & Embeddings**

- Learn:
  - StatQuest – TF-IDF

### **Day 15 - Text Classification**

- Learn:
  - Codebasics – Spam classifier

### **Day 16 - Word Embeddings**

- Learn:
  - Aladdin Persson – Word2Vec

## **Day 17 - Neural Networks Basics**

- Learn:
  - StatQuest + 3Blue1Brown

## **Day 18 - PyTorch Basics**

- Learn:
  - Aladdin Persson – PyTorch

## **Day 19 - Deep NLP Model**

- Learn:
  - Hugging Face tutorials

## **Day 20 - RNN & LSTM**

- Learn:
  - StatQuest – RNN/LSTM

## **Day 21 - Transformers**

- Learn:
  - Jay Alammar – Illustrated Transformer

## **Day 22 - Hugging Face Ecosystem**

- Learn:
  - HuggingFace Course

## **Day 23 - Fine-tuning Transformers**

- Learn:
  - HF fine-tuning guide

## **Day 24 - Evaluation**

- Learn:
  - HF evaluation docs

## **Day 25 - PROJECT 2**

### **Customer Feedback Intelligence System**

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## **PHASE 3 – GENAI CORE (Day 26–55)**

### **Day 26 - LLM Internals**

- Learn:
  - Jay Alammar – LLMs
  - Andrej Karpathy

## **Day 27 - Prompt Engineering**

- Learn:
  - OpenAI Prompt Guide
  - DeepLearning.AI Prompt course

## **Day 28 - Advanced Prompting**

- Learn:
  - Chain-of-Thought, ReAct blogs

## **Day 29 - OpenAI API**

- Learn:
  - OpenAI official docs

## **Day 30 - Chatbot**

- Hands-on:
  - Custom chatbot with memory

## **Day 31 - LangChain Core**

- Learn:
  - LangChain docs

## **Day 32 - Chains & Memory**

- Learn:
  - LangChain memory

## **Day 33 - Embeddings**

- Learn:
  - OpenAI embeddings docs

## **Day 34 - Vector DBs**

- Learn:
  - ChromaDB / FAISS

## **Day 35 - RAG**

- Learn:
  - Pinecone RAG guide

## **Day 36–40 – PROJECT 3**

### **Enterprise Document Q&A (RAG)**

#### **Day 41 – Fine-tuning vs Prompting**

- Learn:
  - OpenAI fine-tuning docs

#### **Day 42 – Function Calling**

- Learn:
  - OpenAI tools docs

#### **Day 43 – AI Agents**

- Learn:
  - LangChain Agents

#### **Day 44 – Multi-Agent Systems**

- Learn:
  - CrewAI docs

## **Day 45–55 – PROJECT 4**

### **AI Research Assistant (Agents + RAG)**

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## **PHASE 4 – PRODUCTION & JOB READY (Day 56–90)**

### **Day 56 – FastAPI**

- Learn:
  - FastAPI docs

### **Day 57 – Backend Architecture**

- Learn:
  - LLM system design blogs

### **Day 58 – Security**

- Learn:
  - OWASP API basics

### **Day 59 – Docker**

- Learn:
  - TechWorld with Nana

### **Day 60 – Cloud Basics**

- Learn:
  - AWS Free Tier tutorials

## Day 61-65 - CAPSTONE PROJECT

### AI Customer Support Agent

- RAG + Agents + Dashboard

## Day 66-90 - INTERVIEW & JOB

- Resume optimization
- Mock interviews
- Applications & referrals

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### Final Deliverables

- 5 GenAI Projects
- Active GitHub
- HR-ready resume
- Clear career-gap story