🧱 Agentic AI using LangGraph

1. 📌 Why Start This Playlist?

Three main reasons:

1. **Timing**
   - *Now is the right time to learn Agentic AI.*
   - Everywhere—YouTube, Twitter, Instagram—Agentic AI is trending.
   - Major companies & thought leaders highlight it as **the next big thing** in computer science.
   - After ChatGPT's arrival (2022), Generative AI matured; now, **AI agents** are expected to create huge value in the next 5 years.
   - Learning this now = future opportunities.

2. **Demand**
   - Strong requests from subscribers (every 3rd comment was about LangGraph).
   - Industry is heavily discussing it.

3. **Build-up**
   - Channel has progressed sequentially:
     - Machine Learning → Deep Learning → LangChain → Generative AI.
   - Viewers are now ready to dive into LangGraph & AI agents.

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3. 🎯 Vision & Goals

- Initial research showed two kinds of existing YouTube content:
  1. **Direct project tutorials** (without fundamentals).
  2. **Basic fundamentals** (very short, lacked depth).
- Problem: No **comprehensive end-to-end resource**.
- Solution: Create a **30–50 video playlist** covering **both fundamentals & projects**.

Specific Goals

1. **Beginner-friendly learning**
   → Anyone, even beginners, can build Agentic AI applications.
2. **Strong command on LangGraph fundamentals**
   → Deep understanding, not just surface-level use.
3. **Conceptual depth**
   → If LangGraph is replaced in the future, learners can adapt to new frameworks easily.

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4. 📚 Curriculum Structure

⚠️ Disclaimer: Curriculum may evolve (since Agentic AI is rapidly changing).

Module 1: Foundations of Agentic AI

- 5–6 videos.
- Topics:
  - What is Agentic AI?
  - Difference: Agentic AI vs AI Agents.
  - Difference: Agentic AI vs Generative AI.
  - What is Agentic RAG? How it differs from traditional RAG.
  - Overview of top frameworks for building Agentic AI apps.
- Goal: High-level overview.

Module 2: LangGraph Fundamentals

- Learn basics of LangGraph:
  - Building graphs.
  - Concept of **state**.
  - **Nodes**, **edges**, **conditional edges**.
  - **Looping** in LangGraph.
- Build simple **AI workflows** using these concepts.

Module 3: Advanced LangGraph Concepts
- Industry-grade features:
    - **Persistence**
    - **Memory**
    - **Human-in-the-loop**
    - **Breakpoints, Checkpointers**
    - **Time travel**
- Learn to create robust, production-level AI agents.

Module 4: Building AI Agents
- The **core module**.
- Process:
    - Theoretical understanding of AI agent design patterns.
    - Hands-on implementation of different agent types:
        - **ReAct Agent**
        - **Reflection pattern**
        - **Self-ask with help**
        - **Planning-based agents**
        - **Multi-agent systems**
- By the end → learner can build **any type of AI agent**.

Module 5: Agentic RAG Applications
- Learn **Agentic RAG** (advanced version of traditional RAG):
    - Merge AI agents with RAG.
    - Cover different architectures:
        - **C-RAG**
        - **Self-RAG**
- Understand how Agentic RAG enhances retrieval-augmented generation.

Module 6: Production Deployment
- Build a complete **project**.
- Focus on making it **resume & interview ready**.
- Add:
    - UI
    - Debugging support
    - Observability
    - Langfuse integration
    - Deployment
- Final output: A production-grade AI agent project.

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5. ✅ Prerequisites
To follow the playlist effectively, learners must know:
1. **Python (Intermediate Level)**
    - Not just basics.
    - Must know:
        - OOP principles
        - typing module
        - **Pydantic**
        - **asyncio**
    - Without this → difficult to follow.
2. **LLMs (Large Language Models)**
    - At least some familiarity.
    - Preferably watched the **LangChain playlist** already.
3. **LangChain**
    - LangGraph is built on LangChain.

- o Playlist constantly uses LangChain dependencies.
- o Without LangChain basics → difficult to understand.

⚠️ Strong recommendation: Watch the **LangChain playlist (18 videos)** first.

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6. ❓ Common Questions Answered
- **Number of videos:** Estimated **35–50 videos** (subject to change).
- **Upload frequency:**
  - o Aim: **3 videos per week**.
  - o Sometimes fewer due to personal life constraints.
- **Timeline:** Entire playlist may take a few months.

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7. 🙌 Closing
- Commitment: Nitish promises to give his **100%** for the next 3–4 months.
- Goal: Build **the best LangGraph playlist available**.
- Call to Action:
  - o Like & share the video.
  - o Subscribe to the channel.
  - o Drop feedback in comments (good suggestions will be integrated).
- Next video: Start of the **first module**.

🌟 Key Takeaways
- **Agentic AI** is the **future of AI applications**.
- **LangGraph** is a powerful framework to build **agentic workflows & agents**.
- This playlist is designed to be the **most comprehensive resource**—from **fundamentals → advanced concepts → real-world deployment**.
- **Prerequisites:** Strong Python, familiarity with LLMs & LangChain.
- **Outcome:** Learners will be able to **design, build, and deploy Agentic AI applications** confidently.