Bibliography

Books

- 1. Russell, S., & Norvig, P. (2020). *Artificial Intelligence: A Modern Approach*. 4th Edition. Pearson. https://www.amazon.com/Artificial-Intelligence-A-Modern-Approach/dp/0134610997
- 2. C aelen, O., & Blete, M.-A. (2023). Developing Apps with GPT-4 and ChatGPT: Build Intelligent Chatbots, Content Generators, and More. 1st Edition. https://www.amazon.com/Developing-Apps-GPT-4-ChatGPT-Intelligent/dp/1098152484
- 3. Auffarth, B. (2023). Generative AI with LangChain: Build large language model (LLM) apps with Python, ChatGPT and other LLMs. https://www.amazon.com/Generative-AI-LangChain-language-ChatGPT/dp/1835083463
- 4. Lim, G. (2023). LangChain Crash Course: Build OpenAI LLM powered Apps: Fast track to building OpenAI LLM powered Apps using Python. Paperback. https://www.amazon.com/LangChain-Crash-Course-OpenAI-powered/dp/B0CHL1FMC4
- Ozdemir, S. (2023). Quick Start Guide to Large Language Models: Strategies and Best Practices for Using ChatGPT and Other LLMs. 1st Edition. Addison-Wesley Data & Analytics Series. https://www.amazon.com/Quick-Start-Guide-Large-Language/dp/0138199191
- 6. Bouchard, L.-F., & Peters, L. (2024). Building LLMs for Production: Enhancing LLM Abilities and Reliability with Prompting, Fine-Tuning, and RAG. https://www.amazon.com/Building-LLMs-Production-Reliability-Fine-Tuning/dp/B0D4FFPFW8

Academic Papers

- 1. Huang, Q., Wake, N., Sarkar, B., Durante, Z., Gong, R., Taori, R., Noda, Y., Terzopoulos, D., Kuno, N., Famoti, A., Llorens, A., Langford, J., Vo, H., Fei-Fei, L., Ikeuchi, K., & Gao, J. (2024b). *Position Paper: Agent AI towards a Holistic Intelligence*. arXiv (Cornell University). https://doi.org/10.48550/arxiv.2403.00833
- 2. Han, S., Zhang, Q., Yao, Y., Jin, W., Xu, Z., & He, C. (2024b). *LLM Multi-Agent Systems: Challenges and open Problems*. arXiv (Cornell University). https://doi.org/10.48550/arxiv.2402.03578
- 3. Topsakal, O., & Akinci, T. C. (2023b). *Creating large language model applications Utilizing LangChain: A primer on developing LLM apps fast.* International Conference on Applied Engineering and Natural Sciences, 1(1), 1050–1056. https://doi.org/10.59287/icaens.1127
- 4. Jeong, C. (2024c). A study on the implementation method of an Agent-Based Advanced RAG system using Graph. arXiv.org. https://doi.org/10.15813/kmr.2024.25.3.005
- 5. Easin, A. M., Sourav, S., & Tamás, O. (2024). *An intelligent LLM-powered personalized assistant for digital banking using LangGraph and chain of thoughts. 2024 IEEE 22nd Jubilee International Symposium on Intelligent Systems and Informatics (SISY)*. https://doi.org/10.1109/SISY62279.2024.10737601

6. Wang, J., & Duan, Z. (2024a). *Intelligent Spark Agents: a modular LangGraph framework for scalable, visualized, and enhanced big data machine learning workflows*. arXiv (Cornell University). https://doi.org/10.48550/arxiv.2412.01490

Articles

- 1. Langchain (2024). *Definitive Guide to Testing LLM Applications*. Al Industry Reports. Available in the reports folder of the Al Agent Lab.
- 2. Latterner, T. (2024). *Guide of AI Agent Types with Examples*. Medium. https://medium.com/@thomas.latterner/guide-of-ai-agent-types-with-examples-79f94a741d44
- 3. CatOps, W. (2024). *Understanding AI Agents: How They Work, Types, and Practical Applications*. Medium. https://medium.com/@williamwarley/understanding-ai-agents-how-they-work-types-and-practical-applications-bd261845f7c3
- 4. Devansh. (2024). *An Overview of the AI Agent Landscape*. Medium. https://machine-learning-made-simple.medium.com/an-overview-of-the-ai-agent-landscape-9c92009a0a30

Websites

- 1. LangChain. (2025). LangChain Documentation. https://python.langchain.com/docs/
- 2. LangChain. (2025). *LangChain Community: Join the LangChain Community*. https://langchain.com/join-community
- 3. LangGraph. (2025). *Multi-agent concepts in LangGraph*. LangChain AI. https://langchain-ai.github.io/langgraph/concepts/multi_agent/
- 4. LangGraph. (2025). *Agent handoffs: How-tos for LangGraph*. LangChain AI. https://langchain-ai.github.io/langgraph/how-tos/agent-handoffs/s
- 5. OpenAl (2025). OpenAl Python. https://github.com/openai/openai-python
- 6. OpenAl API (2025). Open Al API Documentation. https://platform.openai.com/docs/overview
- 7. Docker. (2025). *Using Docker Compose for Multi-Container Applications*. https://docs.docker.com/compose/
- 8. QuestDB. (2025). QuestDB Documentation. https://questdb.io/docs
- 9. QuestDB. (2025). QuestDB Tutorials. https://questdb.io/blog/tags/tutorial
- 10. Code-Server. (2025). *Code-Server: Run VS Code in the Browser*. https://coder.com/docs/code-server/latest
- 11. Grafana. (2025). Grafana Documentation. https://grafana.com/docs/grafana/latest/
- 12. Streamlit. (2025). Streamlit Documentation: Create Interactive Web Apps with Python. https://streamlit.io/generative-ai/

GitHub Repositories for Al Agent Lab

- 1. AI Agent Lab LangChain Streamlit Agents. (2024). Repository for LangChain agents implemented as Streamlit apps. Streamlit-Agent
- 2. AI Agent Lab Chatbot Implementations. (2024). Repository for Chatbot Implementations with Langchain + Streamlit. Langchain-Chatbot
- 3. AI Agent Lab LangGraph Expense tracker. (2024). Repository exploring LangGraph, processes invoices, categorizes expenses, and stores data in a database. LangGraph-Expense-Tracker
- 4. AI Agent Lab Postgres AI Database Agent. (2024). Repository for generating SQL queries from natural language using OpenAI API, integrated with PostgreSQL. Postgres-AI-Database-Agent
- 5. Al Agent Lab Postgres Chatbot with Streamlit. (2024). Repository for a chatbot interacting with PostgreSQL, answering queries via a Streamlit interface. Postgres-Chatbot

Potential Sources for the Bibliography

Based on the project description, you likely need sources related to:

- Al Agent Frameworks: LangChain, agent-based architectures
- Distributed AI Systems: Tools, methodologies for scaling AI
- Edge Computing for IoT: Reference articles on this topic
- Fault Tolerance and Performance Monitoring: Papers or reports on building resilient AI systems
- Technologies in the Docker Stack: QuestDB, Grafana, Nginx, etc.

Keywords to Search:

- Distributed Artificial Intelligence (DAI)
- Multi-Agent Systems (MAS)
- Agent-Based Modeling (ABM)
- Al Infrastructure
- Al Agents
- Distributed AI Systems