Quali sono gli elementi che rendono davvero efficace un approccio AI?

iconsulting

PREREQUISITES

Data Strategy

Your AI Strategy is only as good as your Data Strategy

- Data **Subjects**
- **Roadmap**
- **Use Cases**
- **Architecture**
- Culture

AI-Ready Data Platform

- **Data Quality & Observability**
- **Data Governance**
- **Metadata**
- **FinOps**
- **Structured Data**
- **Semi-structured Data (Text, Logs, ...)**
- **Unstructured Data (Video, Images, ...)**

AI Strategy

- **Use Cases / Business needs**
- **Process optimization opportunities**
- **Technology Stack**
- **Organization Evolution**
- **Governance & Compliance**

Approach to Industrialization

- **IT-Business Ownership Dilemma**
- **Performance**
- **Scalability**
- **Monitoring**
- **Enterprise Features (security, access controls, ...)**

AI Design Principles

- **Data Preparation methodology**
- **Explainable AI (xAI)**
- **MLOps**
- **Privacy and Regulation requirements**
- **Ethics and Social Impacts**

IMPLEMENTATION

Traditional AI

TOOLS / TECH SKILLS

Languages	Python, R, Spark, ...
Libraries/Engines	PyTorch, TensorFlow, scikit-learn, XGBoost, OpenCV, MLLib, ...
AI Platforms	AWS SageMaker, Azure Machine Learning, GCP Vertex AI, Databricks, Snowpark, MLflow, ...
CI/CD (Git)	Azure DevOps, GitLab, GitHub, ...
GUI	Rapidminer, KNIME, Alteryx, Dataiku, DataRobot, ML Studio, ...
Notebooks (Jupyter-like)	
Model Registry & Model Observability	
Feature Store	Feast, Tecton
Pipeline Orchestration	Airflow, Prefect, Dagster, Argo Workflows
Model Serving / API	

MODEL TYPES / SKILLS

- **Mathematical/Statistical Foundations**
- **Machine Learning Foundations**
- **Supervised Learning**
- **Unsupervised Learning**
- **Reinforcement Learning**
- **Deep Learning**
- **Time Series**
- **Natural Language Processing**
- **Computer Vision**
- **Federated Learning**

Generative AI

Vector DB (specialized)	Milvus, Pinecone, Weaviate, Qdrant, Chroma, ...
Vector DB (extension on existing)	PostgreSQL, Redis, Elasticsearch, MongoDB Atlas, Azure Cosmos DB, Oracle, ...
RAG	
Foundation - Local LLM Models	Llama, Mixtral, ...
Foundation - Cloud LLM models	API: OpenAI, Azure OpenAI, Claude, Mistral, Titan, ...
Conversational Front-end (chatbot)	OpenWebUI, LibreChat, LobeChat, Chainlit, custom, ...
Foundation Model providers	AWS Bedrock, OpenWebUI, GCP Vertex AI, custom, ...
Orchestration Frameworks	LangChain, LlamaIndex, AutoGen, ...
Prompt Engineering	(often supported by GPT itself)

Agentic AI

Agent Development
Python, LangGraph, AutoGen

Basic Orchestration
Python, Airflow, Argo Workflows

Agent Orchestration Tools
LangGraph, Copilot Studio, Power Automate, [n8n, Zapier], ...

Model Routing
(cheap vs powerful)

MCP integration

End-user interaction

- Chatbots
- Process automation