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AI Applications in the Workforce

- **Industries**: AI is transforming various industries by improving efficiency, automation, and decision-making processes.
- **Human Role**: AI complements human work by automating tasks but still requires human input for data generation, coding, and oversight.

ANI, AGI, ASI

- **ANI (Artificial Narrow Intelligence)**: AI designed for specific tasks (e.g., image recognition, voice assistants).
- **AGI (Artificial General Intelligence)**: AI capable of performing any intellectual task a human can do (still hypothetical).
- **ASI (Artificial Superintelligence)**: AI surpassing human intelligence across all domains (theoretical future state).

Machine Learning vs. Generative AI

- **Machine Learning (ML)**: Focused on identifying patterns in data to make predictions.
- **Generative AI (GenAI)**: Creates new content (e.g., text, images) based on training data (e.g., ChatGPT, DALL-E).

LLM vs. LMM

- **LLM (Large Language Models)**: AI trained on vast amounts of text data to understand and generate human-like language.

- **LMM (Large Multimodal Models)**: AI capable of processing and generating data across multiple formats (e.g., text, images, audio).

Responsible AI

- **Ethics**: Ensures AI development aligns with fairness, transparency, and accountability.

- **Garbage In, Garbage Out (GIGO)**: Poor quality or biased data leads to unreliable AI outputs.

Hugging Face

- **AI Community**: A platform for developers and researchers to collaborate on AI models, datasets, and tools.

- **Open-source**: Provides accessible frameworks for building and deploying AI.

RBAC (Role-Based Access Control)

- **Definition**: A security framework that restricts system access based on user roles to protect sensitive data.

Data Poisoning

- **Definition**: An attack where adversarial inputs corrupt training data to compromise AI performance.

AI-First Companies vs. AI Companies

- **AI-First**: Companies integrating AI as a core strategy to innovate and stay competitive.
- **AI Companies**: Businesses whose primary focus is developing AI technologies or services.

Transformation Resistance

- **Fear of Unknown**: Many companies hesitate to adopt AI due to unfamiliarity and potential disruptions.
- **Examples**: Transition from book ledgers to online bookkeeping in banking.

Prompt Engineering

- **Definition**: Crafting effective prompts to guide AI models in generating accurate, relevant responses.

Business Use Case: Telecommunication Industry

- **Manual Maintenance**: Reactive approach, addressing issues as they arise.
- **Automatic Maintenance**: Scheduled batch processing to improve efficiency.
- **Predictive Maintenance (ML)**: Uses data patterns to anticipate and prevent failures.
- **Generative AI Maintenance**: Combines historical data, predictions, and solutions to reduce overall maintenance needs.