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A05 Module 05 - AI in Finance

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AI in Finance - Problems That Haven't Been Solved

1. Marketing Financial Products

- Banks struggle with marketing their products (e.g., accounts, loans).

- The more accounts opened, the more successful the bank's product adoption.

- **Challenges:**

    - AI has not effectively solved data mining for product risk assessment.

    - AI struggles with forecasting product performance in the market.

    - Target audience segmentation (ages 20-45, parents, sick individuals).

2. Rate of Return & Risk Management

- AI is needed to predict risk vs. reward in financial products and investments.

- Better AI models could optimize decision-making on returns.

3. AI for Leadership Decision-Making

- CEOs require **GenAI** (Generative AI) for:

    - Predicting product and service success.

    - Identifying strategic locations for expansion.

    - Capital structure optimization.

4. Strategic Planning with AI

- Companies want to increase their product outreach.

- AI should assist in refining and creating **more effective financial products.**

5. Ethical AI in Finance

- AI must address bias in financial decision-making.

- Managing fairness in lending, investments, and financial assessments.

6. Regulating Ambiguities in AI

- AI should help regulate **unclear financial regulations** to ensure compliance.

Problems Created by AI in Finance

1. Machine Learning Bias

- AI models can **unfairly treat** certain demographics based on biased data.
- **Key concerns:**
  - Abuse of demographic data (e.g., denying loans based on unfair criteria).
  - Abuse of **card usage data** for biased financial outcomes.

2. Lack of Transparency

- AI decision-making processes are often unclear.

- Customers and businesses struggle to understand AI-based financial recommendations.

3. Data Breaches & Security Risks

- AI systems collect vast amounts of personal and financial data.

- Increased risk of cyberattacks and financial fraud.

Conclusion

AI plays a significant role in finance but still faces challenges in **bias, transparency, data security, and ethical decision-making.** Future advancements in AI should aim to resolve these issues while improving financial services, fraud detection, and strategic business decisions.