Exercise 3: Framework Mapping Activity

Exercise overview

In this exercise, you will evaluate and map how different regulatory and ethical frameworks apply to an AI-based hiring system. The activity focuses on identifying risks like discrimination and lack of transparency, and linking those risks to applicable compliance requirements (e.g., GDPR, EEOC, Title VII).

Use case: Al-based hiring system for shortlisting job applicants

Background

A tech company deploys an AI system to automate initial resume screening and shortlist candidates for interviews. Concerns have emerged over potential gender and racial discrimination, lack of decision transparency, and the legality of handling applicant data across jurisdictions. This exercise simulates a real-world scenario of assessing AI-driven employment decisions under multiple regulatory lenses.

In this exercise, you will:

- Analyze a fictional AI hiring system
- Document its purpose, users, and data sources
- Map key risks to relevant legal and regulatory frameworks (e.g., GDPR, EEOC, Title VII)
- Summarize findings and propose mitigation strategies to reduce regulatory and ethical risk

Estimated completion time

30 minutes

Task 1: Setup and contextual analysis

Objective: Analyze the system's purpose, stakeholders, and data flows

- 1. Identify how and where the AI model is used in the hiring pipeline.
- 2. Define users (e.g., HR managers, applicants).
- 3. List sensitive data handled (e.g., gender, race, resume contents).
- 4. Identify risks based on system behavior.

Task 2: Framework mapping

Objective: Match regulatory frameworks to use case risks

- 1. Evaluate system practices against the following regulations (access the information via the provided web browser bookmarks).
 - EEOC (U.S. Equal Employment Opportunity Commission)
 - GDPR (if data from EU citizens is used)
 - Title VII of the U.S. Civil Rights Act
- 2. Identify compliance gaps and required governance actions.
- 3. Discuss if automated decisions qualify as "significant effects" under GDPR (Article 22).

Task 3: Identify risks and compliance needs

Objective: Map system behavior to risk types

Risks identified:

- Discrimination based on gender, race
- Lack of transparency in decisions
- Unclear or missing consent for data usage
- Privacy and explainability concerns
- No appeals or review process

Task 4: Recommend mitigations

Objective: Define technical and governance controls

- 1. Audit for bias (e.g., by group membership).
- 2. Publish transparency reports.
- 3. Introduce human-in-the-loop review.
- 4. Use data anonymization and fairness constraints in model training.
- 5. Log automated decisions and user consent.

Final output: Risk mapping table

Risk type	Regulatory guidance	Recommendation
Gender bias	EEOC, Title VII	Conduct regular bias audits
Data privacy violation	GDPR	Ensure valid consent and data minimization
Opaque decisions	GDPR Art. 22, EEOC	Add explainability + appeal mechanism

Exercise review

- 1. What regulation prohibits discrimination in Al-based hiring in the U.S.?
 - A. GDPR
 - B. HIPAA
 - C. EEOC
 - D. FERPA
- 2. Which mitigation strategy best addresses the transparency challenge in AI hiring?
 - A. Use deep learning
 - B. Anonymize training data
 - C. Publish transparency reports and enable human review
 - D. Limit dataset size

STOP

You have successfully completed this exercise.

Cybersecurity Specialization: AI Risk Management Framework Lab Guide