Appendix B: Fictional AI Hiring Project Summary

Project title: SmartHire - AI-based resume screening system

Overview

SmartHire is an AI-driven application designed by a technology company to automate the initial screening and shortlisting of job applicants. The system uses machine learning and natural language processing (NLP) techniques to analyze resumes, match skills with job descriptions, and rank candidates based on their suitability for open positions. The goal is to reduce manual review time for recruiters while improving consistency in shortlisting.

System purpose

To automatically evaluate large volumes of applicant data and produce a ranked shortlist of candidates for HR review. The AI model replaces the manual initial screening process traditionally done by recruiters.

Users

- **HR managers and recruiters**: Use SmartHire's shortlist and scoring dashboard to select candidates for interviews.
- **Applicants**: Submit resumes and personal data through the company's career portal.
- **System administrators/data scientists**: Maintain the AI model and monitor performance for fairness and accuracy.

Data sources and processing

- Applicant resumes (PDF, Word, or text format)

- Application forms and online profiles (LinkedIn, internal career portal)

- Optional pre-screening test scores or certifications

- The model extracts text features (skills, education, experience) and ranks candidates based on alignment with job criteria.

Sensitive data involved

- Personal identifiers (name, contact details)

- Demographic information (gender, nationality, age)

- Educational background and employment history

- Potentially inferred traits such as communication style or leadership potential

AI workflow in hiring pipeline

1. Applicant submits resume and form data.

2. SmartHire parses and analyzes text using NLP.

3. Model assigns a compatibility score.

4. Top-ranked profiles are automatically forwarded to HR.

5. HR manager reviews AI shortlist and proceeds with interviews.

Key ethical and regulatory risks

- **Bias and discrimination**: Model may unintentionally favor certain genders, ethnicities, or schools due to biased training data.

- **Transparency and explainability**: Candidates may not understand why they were rejected or shortlisted.

- **Data privacy and consent**: Handling of personal and EU applicant data raises GDPR compliance concerns.

- **Lack of human oversight**: Fully automated rejection without human review could breach GDPR Article 22 ("automated decision-making with significant effects").