SAMPLE DOCUMENTATION

ANNEX IV Technical Documentation

EU AI Act Compliance Package

Project:	Alpha-Recruit AI v2.1
Classification:	High-Risk (Annex III, Section 4: Employment)
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Documentation Purpose:
This is a **sample template** demonstrating the structure and content required for EU AI Act Annex IV technical documentation. Organizations must customize this template with their actual system details, risk assessments, and compliance measures.

1. System Identification

System Name:
Alpha-Recruit

Version:
2.1.0

Provider:
[Sample Corp]

Intended Purpose:
An AI-driven CV screening tool that ranks candidates based on skill-to-job-description mapping.

Regulatory Classification:
High-Risk AI System under Annex III, Section 4 (Employment, workers management and access to self-employment)

2. System Components & Development

Technical Architecture:

The system employs a transformer-based neural network architecture optimized for natural language processing and semantic matching. The core algorithm analyzes candidate resumes and job descriptions to compute relevance scores based on skills, experience, and qualifications.

Hardware Infrastructure:

Deployed on Amazon Web Services (AWS) infrastructure located in the Frankfurt Region (eu-central-1). The system utilizes cloud-based compute resources with automatic scaling to handle variable processing loads.

Training Data:

Dataset Component	Description	Volume
Anonymized Resumes	Historical candidate applications with personally identifiable information removed	50,000 documents
Expert-Labeled Profiles	Resumes labeled by HR professionals as 'Successful Hire' or 'Unsuccessful'	10,000 benchmark examples
Job Descriptions	Historical job postings with associated hiring outcomes	5,000 postings

Data Provenance:

All training data was sourced from internal HR historical data spanning 2018-2025. Data collection adhered to GDPR requirements, with explicit consent obtained for data usage. Personal identifiers were removed or pseudonymized prior to model training.

Model Development & Validation:

The model underwent rigorous development and testing phases including: initial training on 70% of dataset, validation on 15% held-out set, and final testing on 15% independent test set. Cross-validation techniques were employed to ensure model generalization and prevent overfitting.

3. Risk Management & Mitigation

Risk Assessment Process:

A comprehensive risk assessment was conducted in accordance with EU AI Act requirements for high-risk systems. The assessment identified potential risks related to bias, discrimination, and fundamental rights impacts.

Identified Risk: Gender Bias in Engineering Roles

Risk Category:

Algorithmic Bias / Discrimination

Severity:

Medium-High

Likelihood:

Medium

Description:

Statistical analysis revealed potential gender bias in ranking candidates for 'Engineering' and technical positions, with the model showing tendency to rank male candidates higher when qualifications were equivalent.

Mitigation Strategy:

• **Automated Bias Detection:** Implemented real-time bias-detection algorithms that analyze ranking outputs for gender, age, and other protected characteristics disparities.

• **Data Preprocessing:** Applied debiasing techniques during training data preparation, including balanced sampling and adversarial debiasing methods.

• **Manual Audit Protocol:** 15% of all top-ranked candidates undergo manual review by trained HR professionals to verify ranking appropriateness and catch potential bias.

• **Continuous Monitoring:** Statistical dashboards track demographic distribution of ranked candidates, with automatic alerts when distributions deviate from expected baselines.

• **Regular Retraining:** Model is retrained quarterly with updated data and enhanced debiasing techniques based on monitoring results.

Human Oversight (Human-in-the-Loop):

The system is designed with mandatory human oversight at critical decision points:

• **Initial Review:** HR recruiters review the AI-generated shortlist before any candidate contact.

• **Override Authority:** Recruiters have full authority to modify rankings, add candidates not selected by AI, or remove AI-selected candidates.

• **Final Decision:** All hiring decisions require human approval and cannot be made solely by the AI system.

• **Documentation:** All human interventions and overrides are logged for audit and model improvement purposes.

4. Compliance Certification

Conformity Assessment Procedure:

Internal Control (Article 43) - The provider has established internal quality management systems and conducted internal assessments of conformity.

CE Marking Status:

Pending Final Audit - Technical documentation complete, awaiting third-party validation.

Notified Body:

[To be assigned upon formal audit commencement]

Expected Certification Date:

Q2 2026

Documentation Version Control:

All technical documentation maintained under version control with complete audit trail of changes.

Quality Management System:

The organization has implemented a comprehensive quality management system in accordance with Article 17 of the EU AI Act, including:

- Design and development procedures with documented requirements
- Quality control and assurance protocols throughout the AI lifecycle
- Post-market monitoring and incident reporting systems
- Record-keeping and documentation management procedures
- Resource management and competence requirements for personnel

Documentation Summary

This Annex IV technical documentation package demonstrates compliance with EU AI Act requirements for high-risk AI systems. The Alpha-Recruit system has undergone comprehensive risk assessment, implements robust bias mitigation strategies, maintains mandatory human oversight, and operates within a compliant quality management framework.

This sample illustrates the level of detail and structure required for actual compliance documentation. Organizations must adapt this template to their specific AI systems, use cases, and risk profiles.