CertiGraph

SAMPLE · FICTIONAL SYSTEM

AI ACT EVIDENCE PACKAGE

Audit-ready evidence for a high-risk AI system

TalentRank 2.3 · Lumen Hiring GmbH (fictional)

Package	CG-EP-2026-0147
Issued	3 November 2026
Classification	High-risk · Annex III 4(a), recruitment
Obligations from	2 December 2027
Legal basis	Regulation (EU) 2024/1689 (AI Act), as amended by Regulation (EU) 2026/1744
Generated by	CertiGraph engine 2.6.0 · ontology CG-ONT 4.2.1



20 of 24 obligations fully evidenced

01 Executive summary

TalentRank 2.3 is a **high-risk AI system under Annex III 4(a)**. 20 of 24 applicable obligations are fully evidenced (83%). Four checks show gaps and two need a human decision before the technical file can be finalised.

83%	24	32	26	4	2
COVERAGE	OBLIGATIONS	CHECKS	VERIFIED	GAPS	HUMAN REVIEW



26 verified · 4 gaps · 2 for human review

CLASSIFICATION

High-risk

Annex III 4(a): recruitment and selection of natural persons. Article 6(3) exemption not available. Provider obligations apply from 2 December 2027.

Priority actions

- Add risk signals to the log schema (Art. 12(2)).
- Disclose ranking quality per applicant group in the instructions for use (Art. 13(3)(b)(v)).
- Add data management and change-control procedures to the QMS (Art. 17).
- Decide the two automation-bias questions (Art. 14(4)(b)).

How this package was produced

Policy	Duty	Predicate	Check	Evidence
AI Act articles in scope	24 obligations extracted	Formal, measurable conditions	32 executable checks	14 artefacts linked

> Every obligation is anchored to its article. Checks that cannot be decided mechanically are routed to a named human reviewer and listed in section 07. This package is an audit-support artefact; it does not replace legal sign-off, notified-body assessment or the provider's declaration of conformity.

02 System and classification

TalentRank ranks job applicants for EU employers. Because it evaluates and filters candidates, it falls under Annex III 4(a), and the Article 6(3) exemption does not apply.

Intended purpose	Ranks applicants for a job opening by predicted fit, using CV text and structured application answers. Recruiters see a ranked shortlist with explanations.
Users (deployers)	Recruiters and hiring managers at enterprise employers in the EU (12 customers, 9 Member States).
Affected persons	Job applicants, approx. 380,000 rankings per year.
Inputs	CV text, application form answers, job requirements. No photos, video or audio.
Output	Fit score 0–100, rank position, top-5 contributing factors per applicant.
Model	Fine-tuned transformer encoder + gradient-boosted ranker; retrained quarterly.
Deployment	SaaS, EU region; API and ATS integrations.
Operator role	Provider (develops the system and places it on the EU market under its own name).

Classification trail

PROVISION	TEST	RESULT	REASONING
Art. 5	Prohibited practice?	**No**	No manipulation, social scoring, emotion recognition or biometric categorisation.
Art. 6(1), Annex I	Safety component of a regulated product?	**No**	Not part of a product under Union harmonisation legislation.
Art. 6(2), Annex III 4(a)	Recruitment or selection of natural persons?	**Yes**	Analyses and filters applications and evaluates candidates.
Art. 6(3)	Exemption: narrow procedural or preparatory task?	**No**	The ranking materially influences which applicants are reviewed; the system performs profiling of natural persons, so the exemption is not available.
Art. 50	Transparency duties for chatbots or generated content?	**No**	No direct interaction with applicants; no synthetic content.

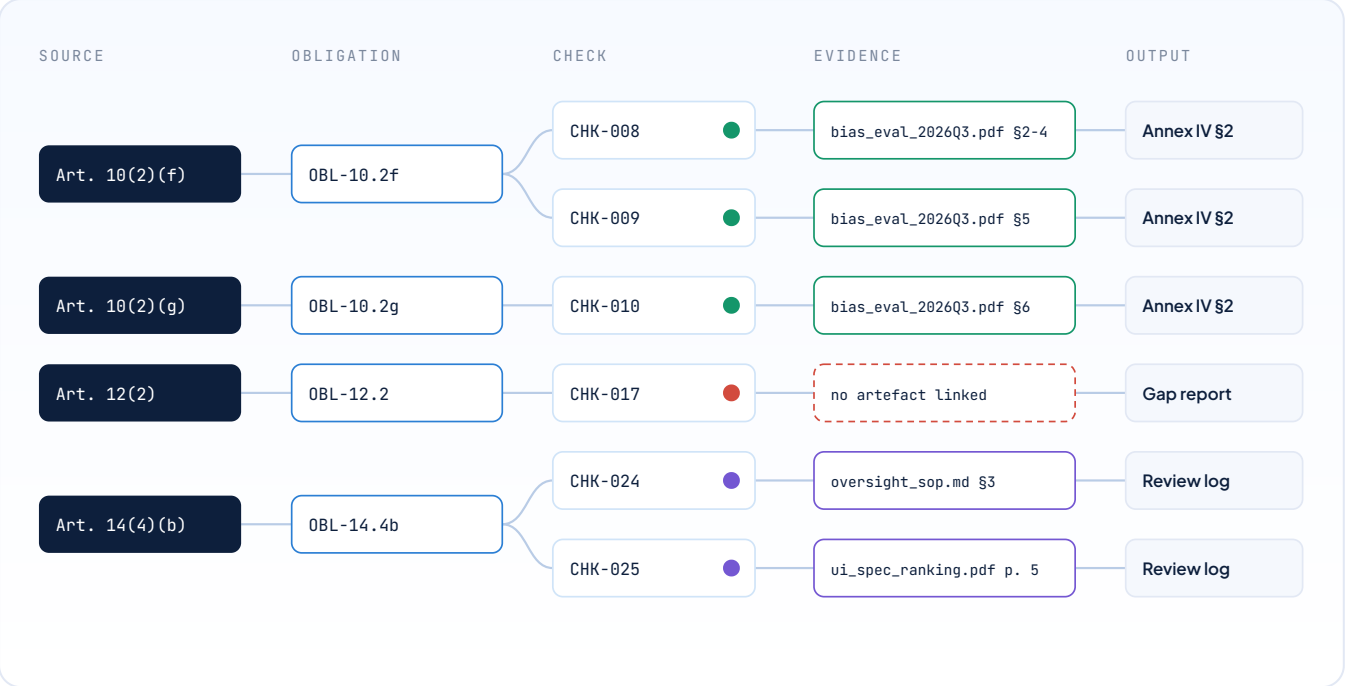
Decision

High-risk AI system · Annex III 4(a)

Chapter III, Sections 1–3 apply from 2 December 2027.

03 Evidence graph

Each requirement links to a formal check and to the artefact that satisfies it. Missing evidence and open questions are part of the graph, not hidden from it.



Verified: evidence satisfies the predicate Gap: no artefact satisfies it Review: needs a human decision

> Excerpt for Articles 10, 12 and 14. The full graph holds 24 obligations, 32 checks and 14 evidence artefacts and is delivered as `CertiGraph_Sample_evidence_graph.jsonld`. On each model update, only the nodes whose evidence changed are re-checked.

Integrity

Graph completeness	Every obligation has at least one check; every check resolves to evidence, a gap or a review item. 0 orphan nodes.
Consistency	0 contradictions between checks. 0 evidence artefacts with version mismatches.
Determinism	Re-running the same inputs produces the same graph and the same digest.
SHA-256 of graph	`496a2c157f7fc135e2c05b466bd2ecc27cced4c94f5c0fef13a632b097f65c71`

04 Traceability matrix

All 32 checks with their article, formal predicate, linked evidence and result. The same data is delivered as `CertiGraph_Sample_traceability.csv`.

CHECK	ARTICLE	REQUIREMENT CHECKED	PREDICATE	EVIDENCE	RESULT
CHK-001	Art. 9(1)	Risk management procedure exists, versioned and owned	exists(doc, type=RMS_procedure) and doc.owner ≠ null	rms_procedure_v2.pdf §1-3	Verified
CHK-002	Art. 9(2)(a)	Risk register covers each pipeline stage	forall s in Pipeline: exists r in RiskRegister: r.stage = s	risk_register.xlsx rows 4-31	Verified
CHK-003	Art. 9(2)(a)	Fundamental-rights risks to applicants identified	exists r in RiskRegister: r.category = fundamental_rights	risk_register.xlsx rows 18-24	Verified
CHK-004	Art. 9(2)(b)	Foreseeable misuse scenarios evaluated	count(r in RiskRegister: r.type = misuse) ⩾ 1 and all scored	risk_register.xlsx rows 25-31	Verified
CHK-005	Art. 9(5)	Residual risk accepted with rationale	forall r in RiskRegister: r.residual_accepted and r.rationale ≠ null	risk_register.xlsx col. P-Q	Verified
CHK-006	Art. 9(6)	Risk measures tested before release	forall m in Measures: exists t in Tests: t.measure = m	eval_report_q3.pdf §6	Verified
CHK-007	Art. 10(2)	Provenance and collection documented per data set	forall d in {train,val,test}: d.provenance ≠ null	data_card_v3.pdf §2	Verified
CHK-008	Art. 10(2)(f)	Bias examination per data set	forall d in {train,val,test}: exists e: bias_exam(d, e)	bias_eval_2026Q3.pdf §2-4	Verified
CHK-009	Art. 10(2)(f)	Feedback-loop effects examined	exists e: bias_exam(retrain_data, e) and e.covers(feedback_loop)	bias_eval_2026Q3.pdf §5	Verified
CHK-010	Art. 10(2)(g)	Mitigation measures linked to bias findings	forall f in BiasFindings: exists m: mitigates(m, f)	bias_eval_2026Q3.pdf §6	Verified
CHK-011	Art. 10(3)	Representativeness measured against applicant population	representativeness(train, population) ⩾ threshold	dataset_stats.ipynb out. 14	Verified
CHK-012	Art. 10(3)	Label error rate measured and within target	label_error_rate(train) ⩽ 0.02	data_card_v3.pdf §4.3	Verified
CHK-013	Art. 10(4)	Data covers all Member States of deployment	forall ms in Deployment.countries: coverage(train, ms) > 0	dataset_stats.ipynb out. 9	Verified
CHK-014	Art. 11(1)	Technical file has all Annex IV sections	forall s in AnnexIV.sections: exists c: covers(c, s)	this package, section 9	Verified
CHK-015	Art. 12(1)	Event logging enabled in production	config.logging.enabled = true and env = prod	logging_spec.md §2	Verified
CHK-016	Art. 12(1)	Log retention period defined	retention_days ⩾ 180	retention_policy.pdf §3	Verified
CHK-017	Art. 12(2)	Logs flag situations that may present a risk	exists field in LogSchema: field.purpose = risk_signal	none linked	Gap
CHK-018	Art. 13(1)	Each ranking shows contributing factors	forall o in Outputs: count(o.explanations) ⩾ 3	ui_spec_ranking.pdf p. 4	Verified
CHK-019	Art. 13(3)(b)(ii)	Instructions state accuracy and robustness levels	ifu.section(accuracy) ≠ null and ifu.section(robustness) ≠ null	ifu_draft_v2.docx §4	Verified
CHK-020	Art. 13(3)(b)(v)	Instructions disclose performance by applicant group	forall g in ProtectedGroups: ifu.reports(metric, g)	none linked	Gap
CHK-021	Art. 13(3)(d)	Instructions describe oversight measures	ifu.section(human_oversight) ≠ null	ifu_draft_v2.docx §6	Verified
CHK-022	Art. 14(1)	Named oversight role defined for deployers	exists role in ifu.roles: role.oversight = true	oversight_sop.md §1	Verified

CHECK	ARTICLE	REQUIREMENT CHECKED	PREDICATE	EVIDENCE	RESULT
CHK-023	Art. 14(1)	Oversight interface allows inspection of each ranking	ui.supports(inspect_ranking)	ui_spec_ranking.pdf p. 6	Verified
CHK-024	Art. 14(4)(b)	Automation-bias guidance adequate for recruiters	adequate(guidance.automation_bias, user = recruiter)	oversight_sop.md §3	Review
CHK-025	Art. 14(4)(b)	Ranking display avoids anchoring on top candidate	ui.ranking_display not anchoring	ui_spec_ranking.pdf p. 5	Review
CHK-026	Art. 14(4)(d)	Recruiter can override and reorder rankings	ui.supports(override) and log(override) = true	ui_spec_ranking.pdf p. 7	Verified
CHK-027	Art. 15(1)	Robustness tested against input perturbation	robustness(perturbation_suite) ⩾ target	robustness_tests.json	Verified
CHK-028	Art. 15(1)	Security testing of model endpoints	exists p: pentest(api) and p.date ⩾ release - 12mo	pentest_summary_2026.pdf	Verified
CHK-029	Art. 15(3)	Accuracy metrics declared with values	ifu.metrics contains {ndcg@10, precision@5}	ifu_draft_v2.docx §4.2	Verified
CHK-030	Art. 17(1)	QMS covers data management procedures	qms.procedures contains data_management	none linked	Gap
CHK-031	Art. 17(1)	QMS covers post-release change control	qms.procedures contains change_control	none linked	Gap
CHK-032	Art. 72(1)	Post-market monitoring plan with data sources and triggers	pmm_plan.sources ≠ {} and pmm_plan.triggers ≠ {}	pmm_plan_v1.md	Verified

05 Obligation register

The 24 provider obligations that apply to TalentRank, extracted from Chapter III of the AI Act with actor, modality and lifecycle stage.

OBLIGATION	SOURCE	REQUIREMENT	LIFECYCLE	DEONTIC	STATUS
OBL-09.1	Art. 9(1)	Establish, implement, document and maintain a risk management system	lifecycle	provider SHALL	Verified
OBL-09.2a	Art. 9(2)(a)	Identify and analyse known and reasonably foreseeable risks	design	provider SHALL	Verified
OBL-09.2b	Art. 9(2)(b)	Estimate and evaluate risks under intended use and foreseeable misuse	design	provider SHALL	Verified
OBL-09.5	Art. 9(5)	Adopt measures so that residual risk is judged acceptable	design	provider SHALL	Verified
OBL-09.6	Art. 9(6)	Test the system to identify the most appropriate risk measures	validation	provider SHALL	Verified
OBL-10.2	Art. 10(2)	Apply data governance practices to training, validation and test data	data	provider SHALL	Verified
OBL-10.2f	Art. 10(2)(f)	Examine data sets for possible biases	data	provider SHALL	Verified
OBL-10.2g	Art. 10(2)(g)	Take measures to detect, prevent and mitigate identified biases	data	provider SHALL	Verified
OBL-10.3	Art. 10(3)	Data sets relevant, sufficiently representative and as error-free as possible	data	provider SHALL	Verified
OBL-10.4	Art. 10(4)	Data sets reflect the geographical, contextual and behavioural setting of use	data	provider SHALL	Verified
OBL-11.1	Art. 11(1)	Draw up technical documentation per Annex IV before placing on the market	release	provider SHALL	Verified
OBL-12.1	Art. 12(1)	Allow automatic recording of events over the system's lifetime	operation	provider SHALL	Verified
OBL-12.2	Art. 12(2)	Logs enable identification of risk situations and support monitoring	operation	provider SHALL	Gap
OBL-13.1	Art. 13(1)	Operation transparent enough for deployers to interpret and use outputs	design	provider SHALL	Verified
OBL-13.3b2	Art. 13(3)(b)(ii)	Instructions state accuracy, robustness and cybersecurity levels	release	provider SHALL	Verified
OBL-13.3b5	Art. 13(3)(b)(v)	Instructions state performance for specific persons or groups	release	provider SHALL	Gap
OBL-13.3d	Art. 13(3)(d)	Instructions describe human oversight measures	release	provider SHALL	Verified
OBL-14.1	Art. 14(1)	Design for effective oversight by natural persons	design	provider SHALL	Verified
OBL-14.4b	Art. 14(4)(b)	Enable overseers to remain aware of automation bias	operation	provider SHALL	Review
OBL-14.4d	Art. 14(4)(d)	Enable overseers to disregard, override or reverse outputs	design	provider SHALL	Verified
OBL-15.1	Art. 15(1)	Achieve appropriate accuracy, robustness and cybersecurity	validation	provider SHALL	Verified
OBL-15.3	Art. 15(3)	Declare accuracy levels and metrics in the instructions for use	release	provider SHALL	Verified
OBL-17.1	Art. 17(1)	Put a quality management system in place	organisation	provider SHALL	Gap
OBL-72.1	Art. 72(1)	Establish and document a post-market monitoring system	operation	provider SHALL	Verified

06 Gap report and remediation

Four checks have no satisfying evidence. Closing them is estimated at 13 working days of the provider's time; none requires changes to the model itself.

CHECK	ARTICLE	SEVERITY	FINDING	REMEDIATION	OWNER	EFFORT
CHK-017	Art. 12(2)	High	Logs do not mark events that may indicate a risk, e.g. sudden score drift for one applicant group.	Add a risk_signal field and drift alerts to the log schema; document thresholds.	ML platform	3 days
CHK-020	Art. 13(3)(b)(v)	High	Instructions for use do not report ranking quality per applicant group.	Publish precision@5 and selection-rate ratios by gender and age band from the Q3 evaluation.	Data science	2 days
CHK-030	Art. 17(1)	Medium	QMS manual has no data management procedure.	Add a data management procedure aligned with EN 18286.	Quality	5 days
CHK-031	Art. 17(1)	Medium	QMS manual has no change-control procedure for model updates.	Add change control linked to quarterly retraining and re-compilation.	Quality	3 days

07 Human review log

Two requirements turn on judgement rather than evidence. They are routed to named reviewers and recorded here, so the decision and its rationale become part of the audit trail.

ITEM	CHECK	ARTICLE	QUESTION	CURRENT STATE	REVIEWER	STATUS
REV-01	CHK-024	Art. 14(4)(b)	Is the automation-bias guidance in the oversight SOP adequate for recruiters who process 200+ applicants a day?	Guidance exists (oversight_sop.md §3) but does not address high-volume screening.	Legal and HR domain review	Pending
REV-02	CHK-025	Art. 14(4)(b)	Does showing a numbered rank encourage recruiters to rely on the top positions?	UI shows rank number and score; an alternative banded view is specified but not default.	Product and legal review	Pending

08 Annex IV mapping

Where each section of the Annex IV technical documentation is covered. Sections 3 and 6 complete once the gaps in section 06 are closed; the declaration of conformity follows.

SECTION	ANNEX IV CONTENT	COVERED BY	STATUS
§1	General description of the system	`Section 3 of this package; model_card_v2.3.md`	Covered
§2	Detailed description of elements and development process	`arch_overview.pdf; data_card_v3.pdf; eval_report_q3.pdf`	Covered
§3	Monitoring, functioning and control	`ifu_draft_v2.docx; oversight_sop.md`	Gap: group performance (CHK-020)
§4	Appropriateness of performance metrics	`eval_report_q3.pdf §3`	Covered
§5	Risk management system (Art. 9)	`rms_procedure_v2.pdf; risk_register.xlsx`	Covered
§6	Relevant changes through the lifecycle	`Change log in model_card_v2.3.md`	Gap: change control (CHK-031)
§7	Harmonised standards applied	`EN 18286 planned for QMS`	Partial
§8	EU declaration of conformity	`Drafted after gaps are closed`	Pending
§9	Post-market monitoring plan (Art. 72)	`pmm_plan_v1.md`	Covered

Delivered files

Evidence package	`CertiGraph_Sample_Evidence_Package.pdf`	This document
Evidence graph	`CertiGraph_Sample_evidence_graph.jsonld`	Machine-readable graph, JSON-LD
Traceability matrix	`CertiGraph_Sample_traceability.csv`	32 checks, one row each

Scope and limits. This is a sample package for a fictional system; names, files and figures are illustrative. CertiGraph packages are audit-support artefacts. They do not constitute legal advice, a conformity assessment, a certification or a declaration of conformity. Conclusions that turn on legal judgement are marked for human review.

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