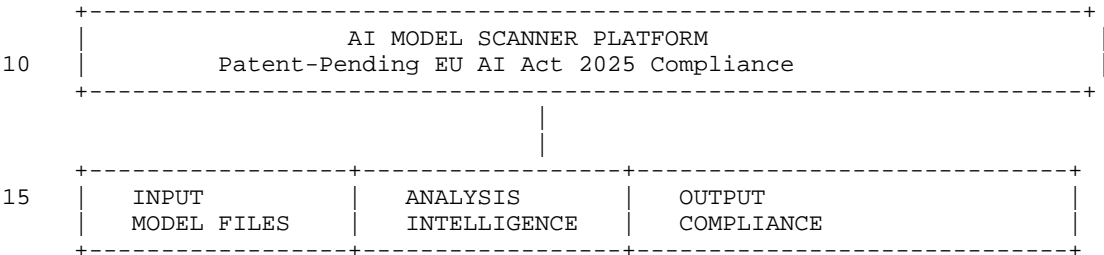
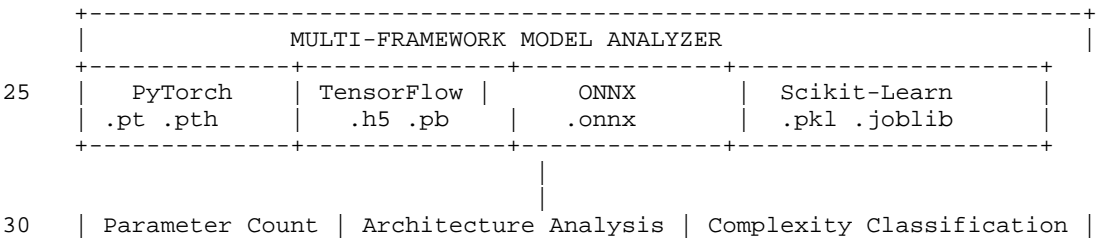


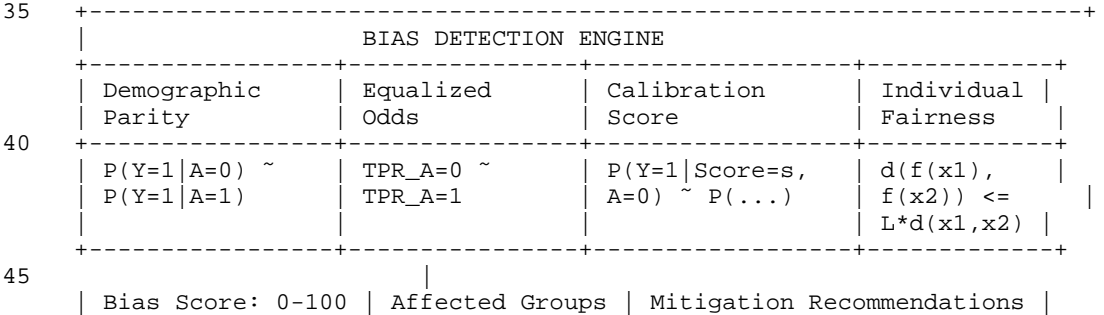
5 FIGUUR 1: SYSTEEM ARCHITECTUUR OVERZICHT



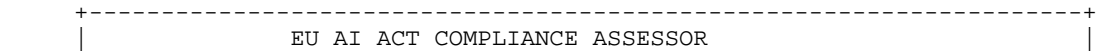
20 FIGUUR 2: MULTI-FRAMEWORK ANALYZER



FIGUUR 3: BIAS DETECTION ENGINE



FIGUUR 4: EU AI ACT COMPLIANCE ASSESSOR



55	ARTICLE 5 Prohibited Practices	ARTICLES 19-24 High-Risk Systems	ARTICLES 51-55 General Purpose AI (GPAI)
60	- Social Score - Manipulation - Subliminal - Biometric ID	- QMS Required - Tech Docs - Record Keeping - CE Marking	- Foundation Model - >1B Parameters - Compute Limits - Adversarial Test
65	EUR 35M or 7% Global Turnover	EUR 15M or 3% Global Turnover	EUR 15M or 3% Global Turnover

FIGUUR 5: NEDERLANDS SPECIALISATIE

70	NETHERLANDS SPECIALIZATION		
75	BSN Detection	UAVG Compliance	Penalty Engine
80	- 9-digit BSN - Checksum Valid - Privacy Risk - GDPR Art.9	- AP Authority - Data Residency - Local Rules - NL Specific	- EUR 35M Max - 7% Turnover - Risk Scaling - Regional Multi

FIGUUR 6: MATHEMATISCHE FORMULES (GECORRIGEERD)

BIAS DETECTION ALGORITHMS:

Formule 1 - Demographic Parity:
 $P(Y=1|A=0) \sim P(Y=1|A=1)$

Formule 2 - Equalized Odds:
 $TPR_{A=0} \sim TPR_{A=1} \text{ EN } FPR_{A=0} \sim FPR_{A=1}$

Formule 3 - Calibration Score:
 $P(Y=1|Score=s,A=0) \sim P(Y=1|Score=s,A=1)$

Formule 4 - Individual Fairness:
 $d(f(x_1),f(x_2)) \leq L \cdot d(x_1,x_2)$

BSN CHECKSUM VALIDATIE (GECORRIGEERD - Officieel Nederlands Algoritme):

checksum = (digit_0 x 9) + (digit_1 x 8) + (digit_2 x 7) +
 (digit_3 x 6) + (digit_4 x 5) + (digit_5 x 4) +
 (digit_6 x 3) + (digit_7 x 2) - (digit_8 x 1)

105 BSN is geldig als: checksum mod 11 == 0

Voorbeeld: BSN 111222333

= (1x9) + (1x8) + (1x7) + (2x6) + (2x5) + (2x4) + (3x3) + (3x2) - (3x1)
= 9 + 8 + 7 + 12 + 10 + 8 + 9 + 6 - 3

110 = 66 mod 11 = 0 ✓ GELDIG

PENALTY CALCULATION:

115 penalty = MAX(
fixed_amount x regional_multiplier,
revenue x percentage x regional_multiplier
)

120 waarbij:

fixed_amount = EUR 35,000,000 (Artikel 5) of EUR 15,000,000 (Artikelen 19-24)

percentage = 7% (Artikel 5) of 3% (Artikelen 19-24)

regional_multiplier = Nederland-specifieke compliance factor

125

FIGUUR 7: SYSTEEM FLOW DIAGRAM

INPUT

```

130  |
    +--> Multi-Framework Analysis
        |
        +--> Bias Detection
            |
            +--> EU AI Act Assessment
                |
                +--> Netherlands Specialization
                    |
                    +--> Real-time Monitoring
                        |
                        +--> Compliance Reports

```

140

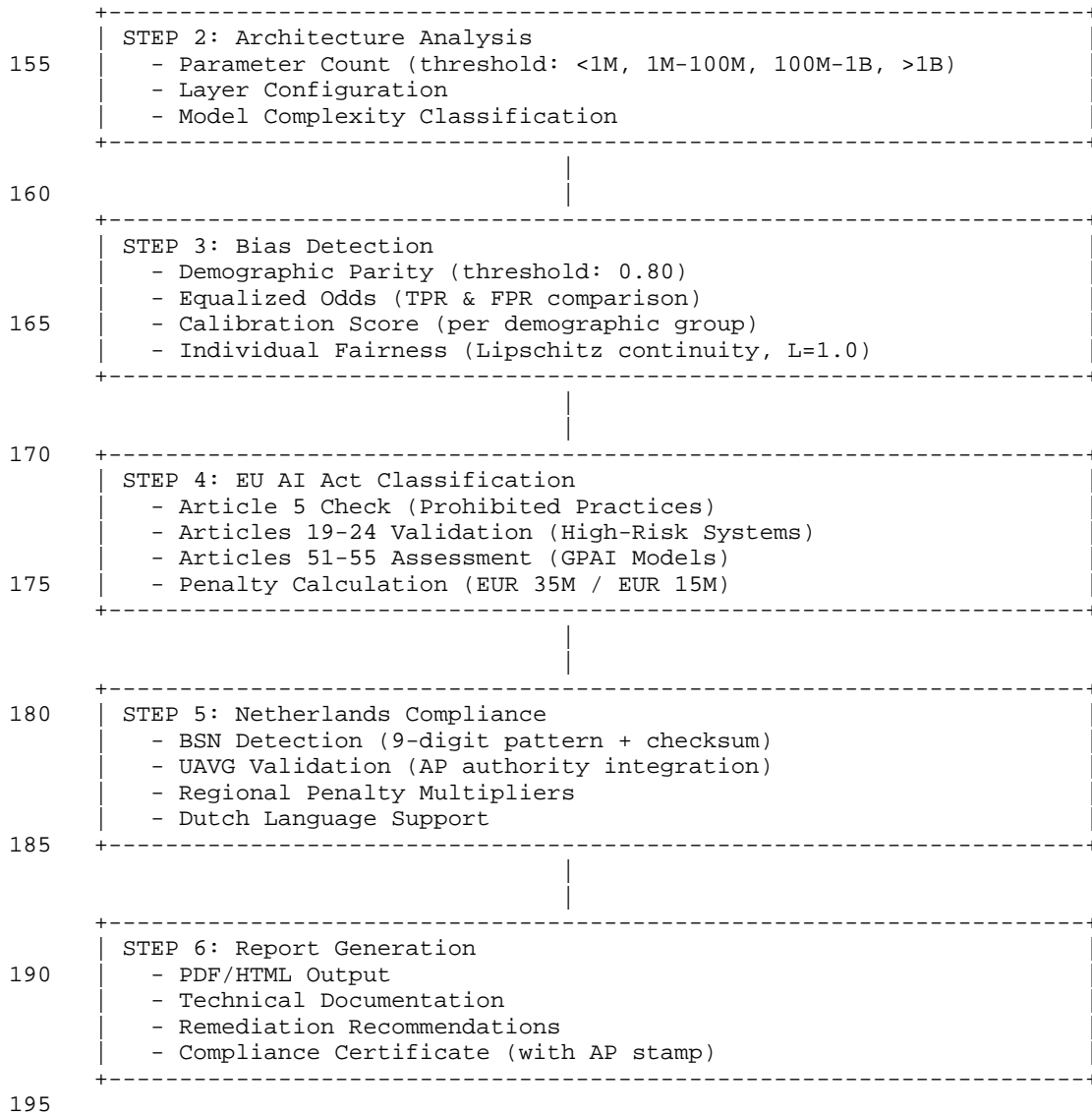
FIGUUR 8: PROCESSING PIPELINE

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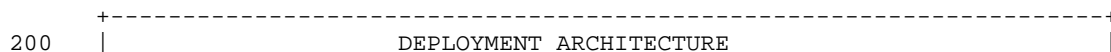
145  +-----+
    | STEP 1: Model Upload |
    | - Framework Detection (PyTorch/TensorFlow/ONNX/scikit-learn) |
    | - File Validation (.pt, .pth, .h5, .pb, .onnx, .pkl, .joblib) |
    +-----+

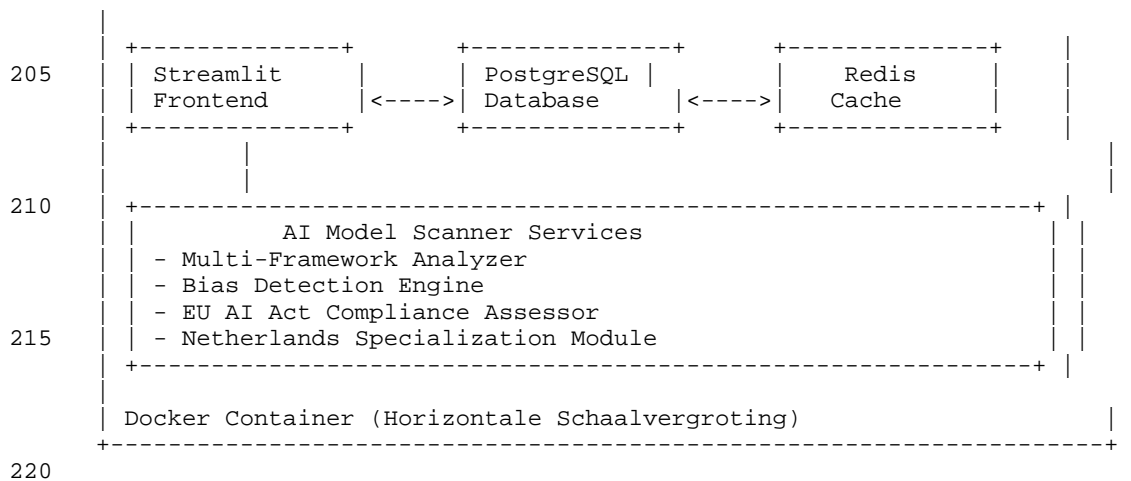
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150



FIGUUR 9: DEPLOYMENT ARCHITECTUUR





FIGUUR 10: COMPETITIVE ADVANTAGE MATRIX

225	FEATURE	DataGuardian	Systeem A	Systeem B	Systeem C
	Automated Bias	Y	N	N	W
	Multi-Framework	Y	N	N	W
	BSN Detection	Y	N	N	N
230	EU AI Act 2025	Y	W	W	W
	Cost (Annual)	EUR 2.5K-25K	EUR 50K-500K	EUR 75K-400K	EUR 100K+
	Cost Savings	BASELINE	95%	96%	97%

235 Legend: Y = Full Support, W = Partial Support, N = No Support
 FIGUUR 11: VALUE PROPOSITION

240	PATENT VALUE PROPOSITION	
	Market Opportunity:	EUR 447M (EU-wide AI compliance market)
245	Target Market:	1.8M EU companies using AI
	Netherlands Market:	EUR 23M (150,000 companies)
	Penalty Prevention:	Up to EUR 35M per violation
	Cost Savings:	95-97% vs commerciele oplossingen
250	Processing Speed:	<30s (vs hours manually)

	Accuracy:	95%+ bias, 98%+ compliance
255	First-Mover Advantage:	EU AI Act enforced Feb 2025
	Patent Protection:	20 years (until 2045)

| Patent Value: EUR 1M - EUR 2.5M |

+-----+

260

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BELANGRIJKE TECHNISCHE CORRECTIES

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265

BSN FORMULE CORRECTIE:

OLD (FOUT):

checksum = SUM(digit_i x (9-i)) mod 11 ✗ INCORRECT

270

NIEUW (CORRECT):

checksum = (digit_0 x 9) + (digit_1 x 8) + ... - (digit_8 x 1) ✓ CORRECT

De laatste digit (digit_8) gebruikt factor 1, NIET factor (9-8)=1 via formule.
Dit is het officiële Nederlandse BSN 11-proef algoritme.

275

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EINDE TEKENINGEN EN FORMULES

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