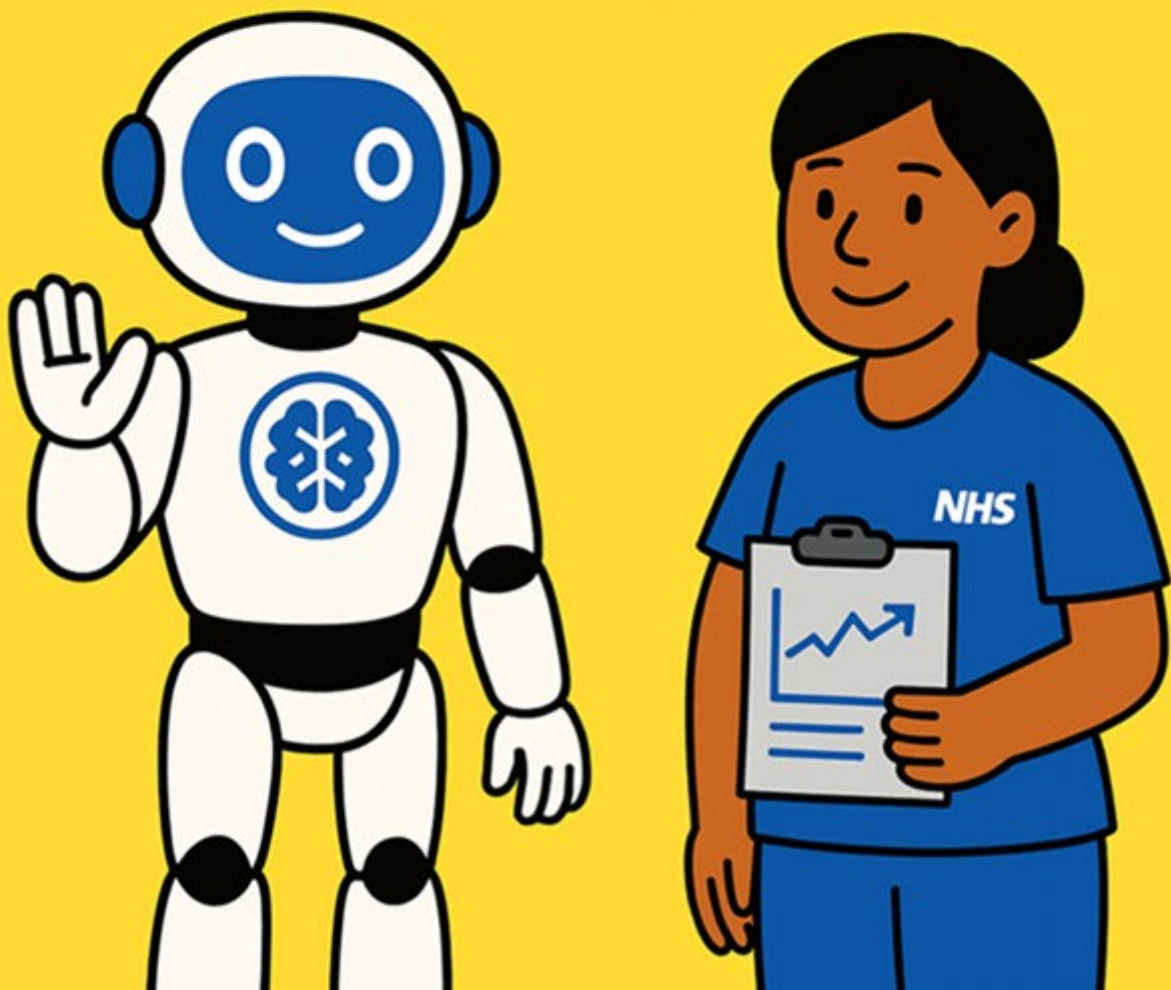


Simple AI & Data Quality

**Why better data means
better AI**



Why AI Needs Good Data

Better data = better outcomes

AI is only as good as the data it learns from. Poor-quality data leads to poor-quality results. In the NHS, this can mean: unsafe patient care, flawed planning, missed fraud, or unfair staff decisions.

Inaccurate Data



leads to
unreliable
predictions



Missing Data



creates
gaps in
decisions



NHS Impact

risks in safety, audit,
and planning



**Good data is the foundation of safe,
fair NHS AI.**

Assessing Data: Getting the Basics Right

Steps to assess if data is fit for AI use

Evaluating data quality beforehand helps
make sure AI is well matched to the task



Accuracy

Data is correct
and up-to-date

Completeness

Information
is present and
not missing



Consistency

Values don't contradict
facts from other sources



Representativeness

Groups or scenarios
are evenly represented



Why Data Quality Matters in the NHS

Real-world risks when data is poor

Poor data doesn't just affect AI models – it creates risks across NHS services. Inaccurate, missing, or inconsistent data can lead to unsafe care, flawed decisions, and reduced trust.



Patient Safety

Errors in coding risk patient harm



Fraud & Audit

Data errors can hide suspicious activity

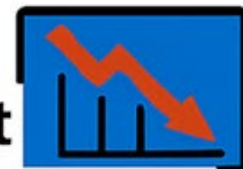
Workforce Planning

Incomplete data skews staffing models



Service Improvement

Bad data undermines change programmes



Common NHS Data Issues

Everyday problems that affect AI

Poor NHS data leads to errors, risks and bias.



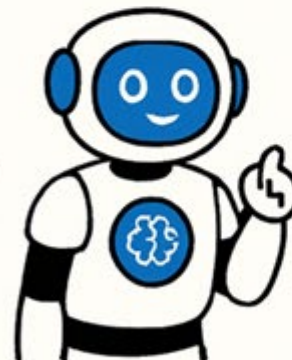
Spelling errors
in patient or
provider names



Out-of-
date
addresses
or contact
details



Missing
clinical codes
or procedure
details



Wrong
formats
(e.g., dates,
NHS
numbers)



Inconsistent
coding between
Trusts

Good data means safer care, stronger assurance, and fairer decisions in the NHS

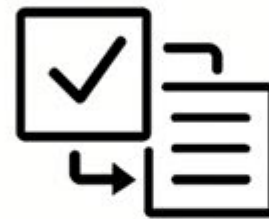
Spotting Data Problems Early

Practical checks:

Run regular data quality dashboards



Use validation rules in systems



Cross-check across datasets



Include data quality in audits

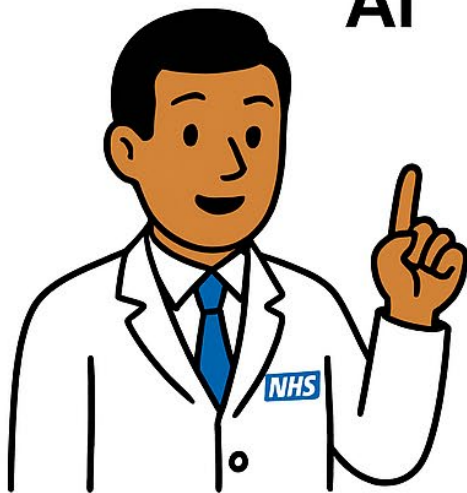


Get frontline staff feedback on errors

Catching issues early helps prevent bigger problems later.

Managing Data Quality in AI Projects

**Always review
data before training
AI**



**Apply NHS standards
(DSPT, DCB, DTAC)**



**Use
representative
samples**



**Record and report
known data limits**



**Monitor quality
continuously, not just once**

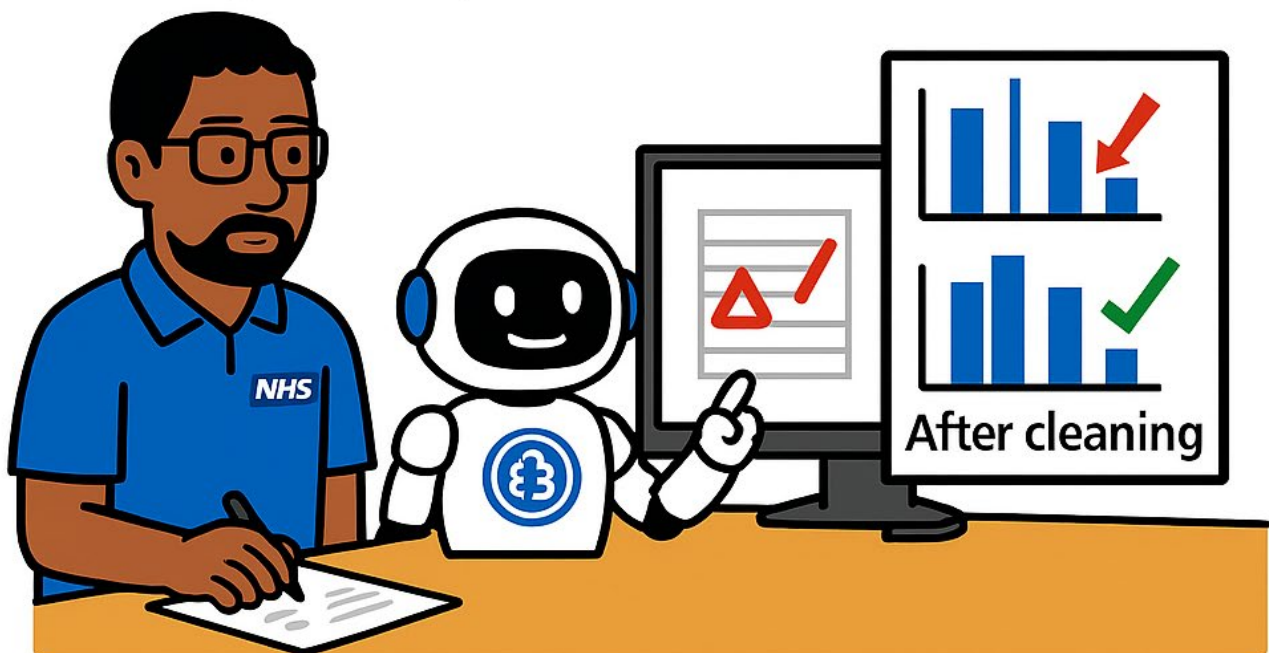
Good Practice Checklist

-  Define the purpose before using data
-  Test data against the six quality dimensions
-  Involve clinicians, auditors, and analysts
-  Document assumptions and limits
-  Keep improving data quality over time

Case Study Example

Why data quality matters in practice

ANHS example: An AI model for fraud detection was missing supplier details in 10% of records. Without cleaning and completing this data, the system missed red flags. After improving data quality, detection rates rose significantly.



Better data means better AI – and stronger fraud detection in the NHS.



Final Thoughts

AI can help the NHS tackle big challenges — but only if the data is trustworthy.

By checking data early, fixing problems, and keeping quality high, NHS teams can build AI that is safe, fair, and effective



Need help? MIAA can support your next move.

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