

Actuarial Risk Assessment

Criminal Justice

What structured risk tools can do, and the limits no tool can engineer away.

Structured tools estimate the probability of an outcome for a group, then apply it to an individual.

BASE RATE PROBLEM

Rare events are hard to predict

FAIRNESS RESULT

Some fairness measures are incompatible

- Group probabilities applied to one person
- Better than unaided judgement on average
- Accuracy is moderate, not high
- Rare outcomes generate many false positives
- Fairness criteria cannot all hold at once

LOOK FOR IT

A tool can be calibrated across groups and still differ in error rates.

Educational reference. Tools are decision aids; they inform decisions rather than making them, and their limits should be stated.