About this dashboard

This dashboard summarizes:

- Model quality on held-out test data
- Error balance (FN vs FP)
- Fairness across subgroups
- Clinical/business interpretation

This model is **not** a diagnostic tool.
It is intended for **early risk flagging / triage support**.

Key metric priority: **Recall on the positive (high-risk) class** to reduce False Negatives.

Heart Attack Risk Prediction Dashboard

Interactive summary of model performance, fairness, and clinical/business insights.

Model Performance | Fairness & Ethics | Clinical Interpretation

Subgroup Error Analysis

We break down model performance by subgroup to check for potential bias.

Ethical interpretation:

- High **False Negative** rate in a subgroup → that group is being under-protected.
- High **False Positive** rate in a subgroup → that group may face unnecessary stress/testing.

	Group	TN	FP	FN	TP	Recall_in_group	Precision_in_group
0	Gender=Male	390	400	190	153	0.45	0.28
1	Gender=Female	333	276	140	118	0.46	0.30
2	Age<=30	159	159	69	33	0.32	0.17
3	Age 31-45	179	199	67	75	0.53	0.27
4	Age 46-60	203	131	189	49	0.21	0.27
5	Age 60+	182	272	85	114	0.57	0.30

Observations:

- Gender groups show broadly similar recall, suggesting no extreme gender-specific failure mode.
- Recall tends to improve in older age groups (60+), which is clinically plausible because classic cardiometabolic risk factors are stronger and easier to detect.
- No single subgroup appears catastrophically underserved, which is encouraging.

⚠ Location-based features (state, emergency response time) are influential. This may reflect structural healthcare inequality, not just biology. That must be reviewed before deployment.

Use case policy: this model should support preventive outreach and triage, NOT deny services or insurance coverage to specific groups.