A graph of a graph

Description automatically generated with medium confidence

Evaluation Results:

performance: {'accuracy': 0.97289, 'precision': 0.9648841123915577, 'recall': 0.9649091003263065, 'f1\_score': 0.9648966061971539}

Variance of Numerical Features:

Num\_Children: 1.9882564969649696

Income: 528038693.06598526

Fairness Metrics:

Attribute: Gender

Statistical Parity: {'Female': 0.19545727436461877, 'Male': 0.5766140315810514}

Equal Opportunity (TPR): {'Female': 0.9278752436647173, 'Male': 0.9774136557314581}

Equalized Odds (TPR): {'Female': 0.9278752436647173, 'Male': 0.9774136557314581}

Equalized Odds (FPR): {'Female': 0.01797479054272431, 'Male': 0.029910693190946462}

Attribute: Own\_Car

Statistical Parity: {'No': 0.2904045469742561, 'Yes': 0.42700813240119845}

Equal Opportunity (TPR): {'No': 0.9491175796470318, 'Yes': 0.969519539614561}

Equalized Odds (TPR): {'No': 0.9491175796470318, 'Yes': 0.969519539614561}

Equalized Odds (FPR): {'No': 0.019070996978851965, 'Yes': 0.023680413909755733}

Attribute: Own\_Housing

Statistical Parity: {'No': 0.3191653269024652, 'Yes': 0.48542990468625896}

Equal Opportunity (TPR): {'No': 0.9562588717733032, 'Yes': 0.9733067932424846}

Equalized Odds (TPR): {'No': 0.9562588717733032, 'Yes': 0.9733067932424846}

Equalized Odds (FPR): {'No': 0.021356073824678676, 'Yes': 0.02353225416767335}

Attribute: Income\_Category

Statistical Parity: {'High': 0.7338694346222577, 'Medium': 0.0002531752394615807}

Equal Opportunity (TPR): {'High': 0.971167131572773, 'Medium': 0.023529411764705882}

Equalized Odds (TPR): {'High': 0.971167131572773, 'Medium': 0.023529411764705882}

Equalized Odds (FPR): {'High': 0.09478340237309556, 'Medium': 0.00012727234159896485}

Subgroup Accuracy by Sensitive Attribute:

Attribute: Gender

Male: 0.9743154107535479

Female: 0.971462877726636

Attribute: Own\_Car

Yes: 0.9734198887145099

No: 0.9716482781678368

Attribute: Own\_Housing

Yes: 0.9749305003971406

No: 0.9715132636655949

Attribute: Income\_Category

High: 0.9533097600851679

Medium: 0.9946200261614414