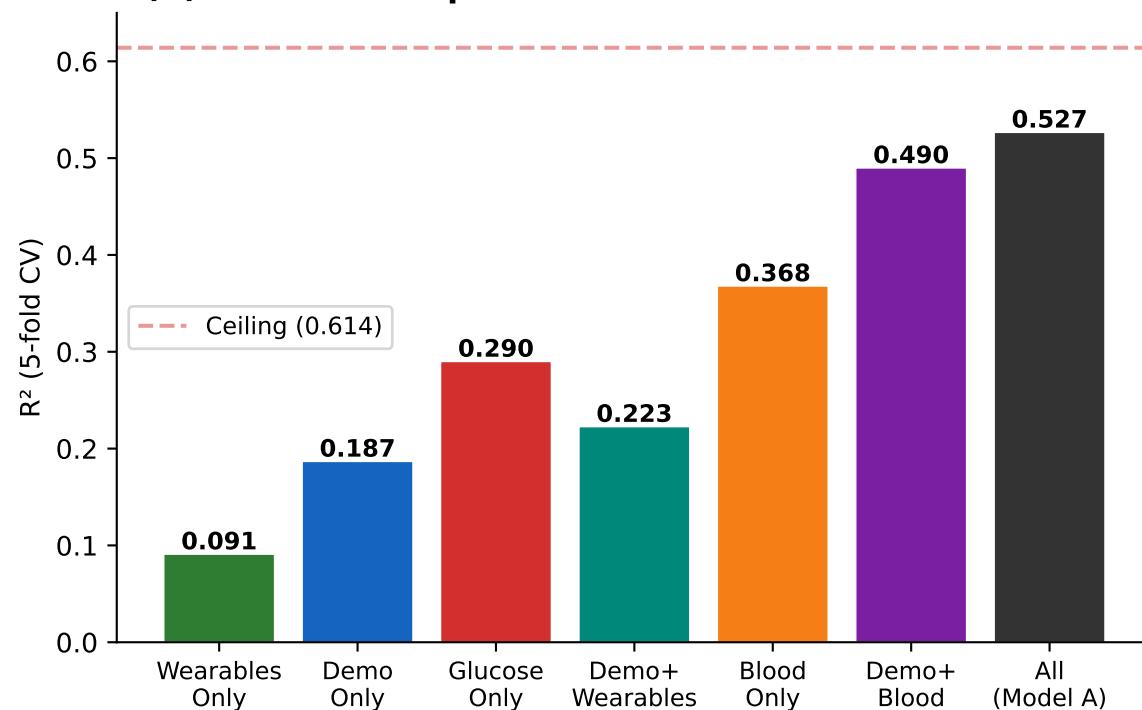
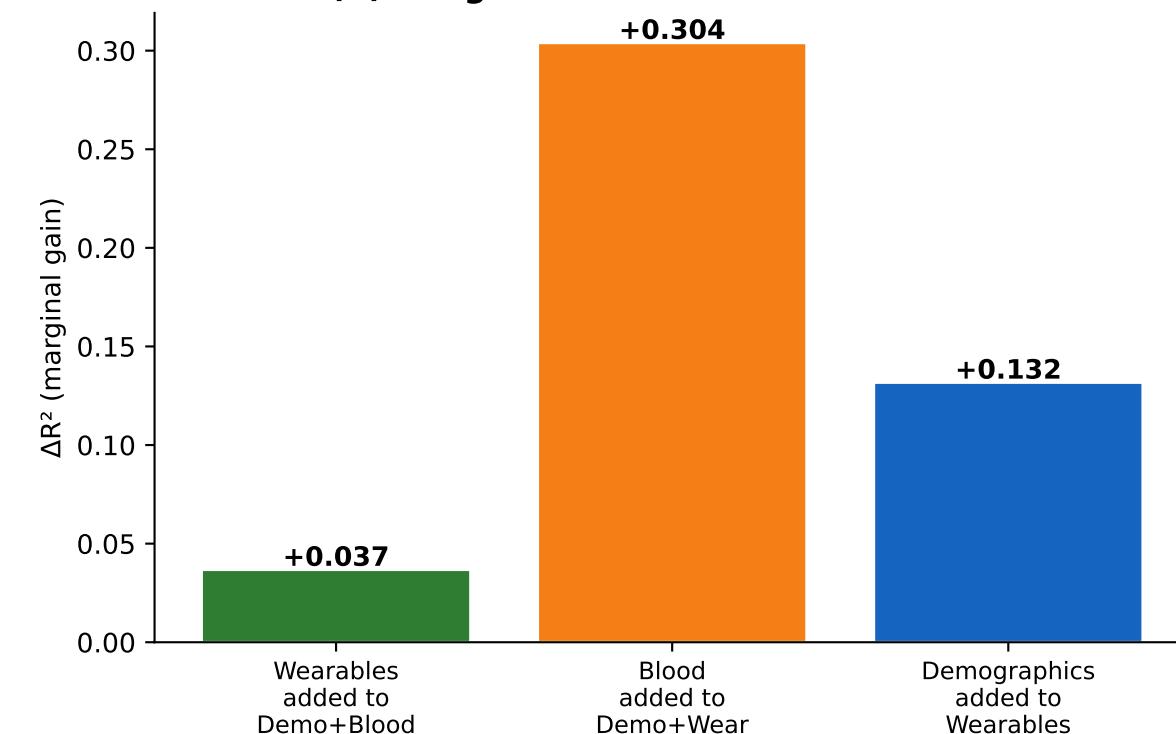


What Can Wearables Tell Us About Insulin Resistance?

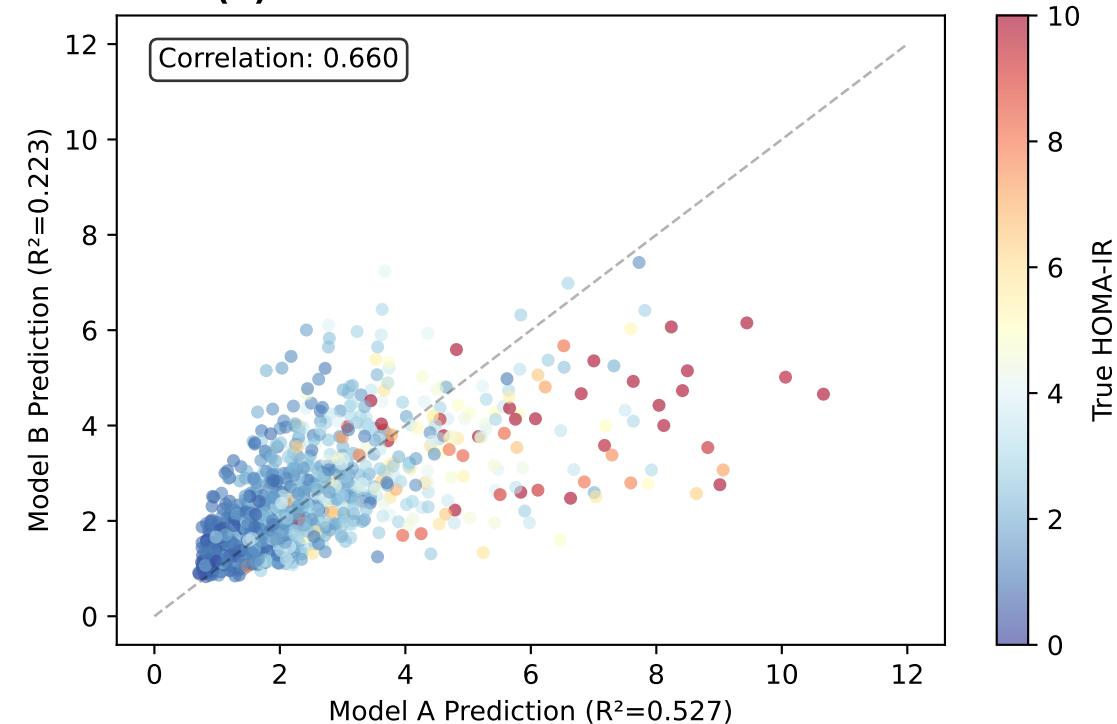
(A) Feature Group Contribution to HOMA-IR Prediction



(B) Marginal Information Contribution



(C) Model A vs Model B Predictions



(D) Information Hierarchy for HOMA-IR

$$\text{HOMA-IR} = \text{Glucose} \times \text{Insulin} / 405$$

Insulin (r=0.97) — NOT AVAILABLE

↓ Partial signal from proxy features

Wearables only: R²=0.091

Demographics only: R²=0.187

Blood biomarkers only: R²=0.368

All features combined: R²=0.527

Theoretical ceiling: R²=0.614

Remaining gap: 0.087 (within estimation error)