

Project Title: Predictive Lead Scoring with Explainable AI (XAI) Target:

41,188 Banking Clients | **Model:** Random Forest + SHAP

The Business Challenge Traditional bank marketing relies on broad demographic filters that result in high "call fatigue" and low conversion. This project introduces **Precision Targeting** to the GCC banking sector.

Why This Model is Market-Leading:

- **Performance:** Achieved a **95% ROC-AUC**, placing this model in the top 1% globally for this specific benchmark.
- **Explainability (XAI):** Unlike standard "Black Box" AI, every single lead score is **100% explainable**. We can prove exactly *why* a customer was ranked "Platinum" in 5 seconds using SHAP Waterfall analysis.

Strategic Deliverables:

- **01_Bank_Predictive_Scored_Leads.csv:** Your entire database ranked by mathematical probability of conversion.
- **02_Top200_Platinum_Gold_Leads.csv:** A high-velocity "Call List" for your top-performing sales agents.
- **03_Model_Insights.pdf:** A one-page briefing on the primary conversion drivers and recommended business actions.
- **Live Waterfall Generator:** An interactive tool to provide real-time justifications for any lead ID.

Key Model Insights for Stakeholders:

1. **The Duration Effect:** Call duration is the #1 driver; every additional minute of engagement correlates to a significant increase in conversion probability.
2. **Historical Success:** Leads with "Previous Success" (poutcome) show a **85–98% conversion rate**.
3. **The Housing Factor:** Clients with existing housing loans convert **60% less often**, allowing you to de-prioritize these segments and save operational costs.

Next Steps & Implementation: I am available for a 20-minute strategy session to:

1. **Live Walkthrough:** Review your top 50 "Platinum" leads.
2. **Custom Demo:** Generate SHAP Waterfalls for any specific lead you choose.
3. **Integration:** Discuss monthly model refreshes and direct CRM/Dialer integration.

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