Reducing Customer Churn: A Data-Driven Strategy for SyriaTel

- **Subtitle:** Identifying at-risk customers to protect revenue and improve retention.
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Overview (Beginning)

•**The Challenge:** SyriaTel is losing revenue when customers "churn" (stop using our services).
•**The Opportunity:** By predicting who is likely to leave, we can intervene before they go.
•**Project Goal:** Build a predictive model to identify high-risk customers and understand the "why" behind their departure.
•**Key Outcome:** A tool that allows for proactive, personalized marketing and service improvements.

Business & Data Understanding

- **Business Impact:** Every lost customer is a direct hit to our bottom line. Retention is more cost-effective than acquisition.
- **Our Data:** We analyzed 3,333 customer records, including:
- **Call Patterns:** Minutes and charges across day, evening, and night.
- **Service Interaction:** Number of customer service calls.
- **Plan Types:** Presence of international or voice mail plans.
- **Goal:** Move from reactive to proactive customer management.

Modeling (Middle)

•**Our Approach:** We tested two primary models to ensure the best balance of accuracy and reliability:

•**Logistic Regression:** A foundational model for understanding basic probabilities.

•**Decision Tree:** A more sophisticated approach that identifies complex patterns in customer behavior.

•**Focus:** We prioritized models that don't just give a "Yes/No" but provide probability scores to help prioritize our outreach.

Visualizations
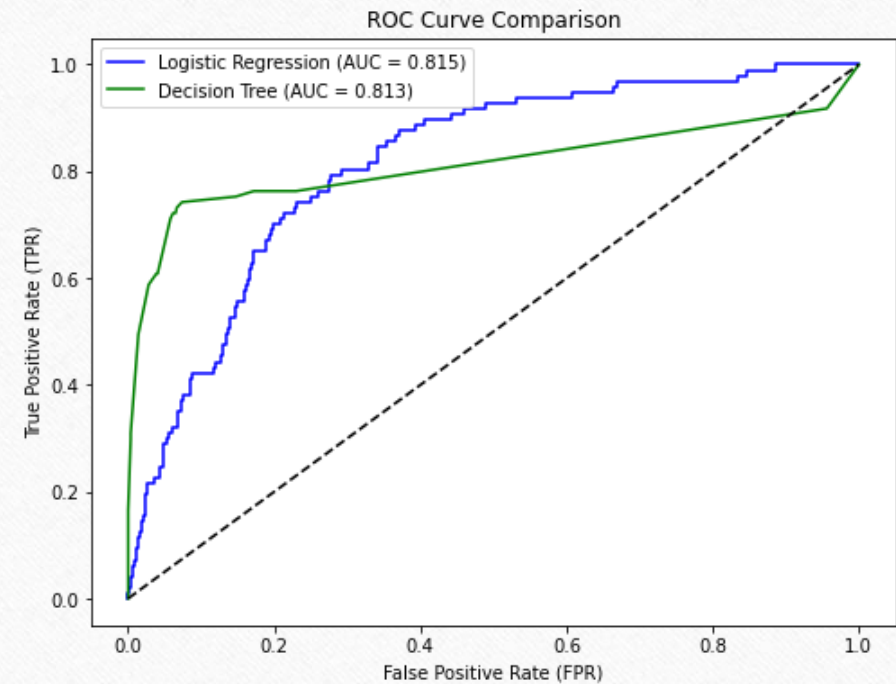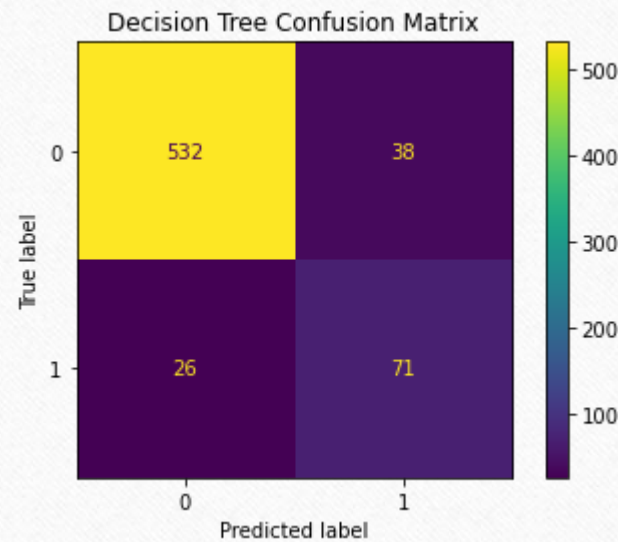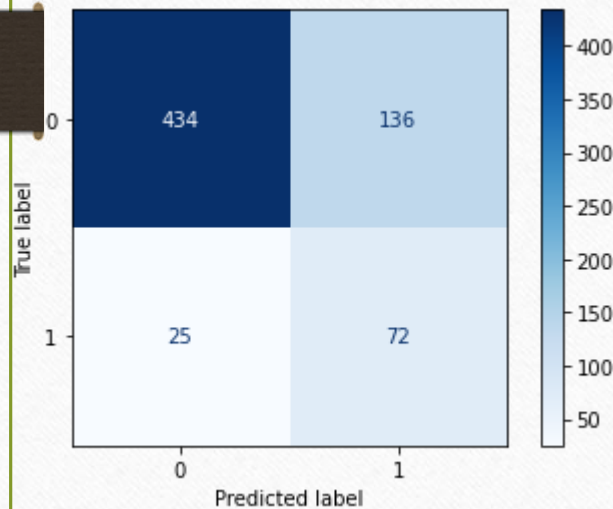
Evaluation

- **Performance Highlights:**
- **Accuracy:** Our Decision Tree model correctly predicted 90% of all customer outcomes.
- **Reliability (Precision):** 65% of customers we flagged as "at-risk" were actual churners, significantly reducing "false alarms" compared to previous methods.
- **Effectiveness (Recall):** We successfully identified 73% of all customers who were planning to leave.
- **Business Value:** This model is more trustworthy, helping us avoid unnecessary marketing costs on customers who aren't actually leaving.

Recommendations (End)

•**Targeted Retention:** Use the model's probability scores to offer promotions to the top 10% of at-risk customers.

•**Service Quality:** Address the "Service Call" threshold; customers with high service call volumes should be automatically flagged for a "loyalty check-in."

•**Plan Optimization:** Review international and data plan usage patterns to offer personalized plan upgrades that better fit customer behavior.

Next Steps

•**Pilot Program:** Roll out the model to a single region to test the effectiveness of retention offers.
•**Continuous Learning:** Update the model monthly with new customer data to capture changing trends.
•**Integration:** Incorporate these predictive scores directly into the Customer Relationship Management (CRM) dashboard for our frontline staff.

Thank You & Questions

- **Closing:** Data-driven retention is the key to SyriaTel's long-term growth.
- **Contact:** mailto:claire.njeri@student.moringaschool.com
- **Invite Questions:** "How can we best integrate these insights into your current workflow?"