GS **ChurnStarPRED**
Predictive AI for Customer Retention

GalaxyStar Health Insurance

Team Introduction | Problem Overview | Prediction Tool | Customer Examples | Model Performance | Drift Monitoring | Business Impact | Conclusion | Thank

IPL Institute of Product Leadership

ChurnStarPRED Development Team

Building Predictive AI Solutions for Customer Retention Excellence

VA

Vivek Agarwal
Product Manager & Strategy Lead

- Product vision and roadmap leadership
- Stakeholder alignment and business strategy
- Strategic implementation of ChurnStarPRED

MV

Manoj Varma
AI/ML Specialist & Model Architect

- Predictive AI model development
- Prompt engineering and LLM optimization
- Synthetic data generation and model evaluation

N

Nagendra
Business Analyst & Data Insights Lead

- Customer persona research and analysis
- Business impact assessment and ROI calculations
- Ethical AI considerations and bias mitigation

SS

Sameer Subhedar
Technical Implementation Lead

- Deployment architecture and system integration
- Real-time vs batch processing optimization
- Drift monitoring and continuous improvement

Our Mission

To revolutionize customer retention in healthcare insurance through explainable AI, transforming churn prediction from a "black box" solution into actionable insights that empower business teams to proactively retain valuable customers and drive sustainable growth.

🎯 Increase actionability score from 1.5/5 to 4/5

📈 Reduce churn rate from 18% to 16.5%

💡 Deliver explainable AI for better decision making

Academic Excellence

🎓 **Capstone Project**
Advanced AI/ML Product Management

🏛️ **Institute of Product Leadership**
India's Premier Product Management Program

🔬 **Research Focus**
Explainable AI & Customer Analytics

Current Business Challenge

Understanding the gap in our current churn prediction capabilities

18%	**1.5/5**	**₹12.5 Cr**
Current Churn Rate	Actionability Score	Annual Revenue at Risk
Target: 16.5%	Target: 4/5	Cost of customer churn

The Core Problem

"We know WHO will churn, but not WHY"

Our current approach lacks explainability and actionable insights, making it difficult for our teams to implement effective retention strategies.

Customer Churn Prediction Tool

Test our AI model with different customer scenarios

Customer Details

Age

35

Tenure (months)

24

Claims Count

2

Avg Reimbursement Delay (days)

15

Negative Sentiment Score

30

Late Payment Count

1

Predict Churn Risk

Prediction Result

Low Risk	80% Confidence

Key Risk Factors:

- Some payment punctuality issues
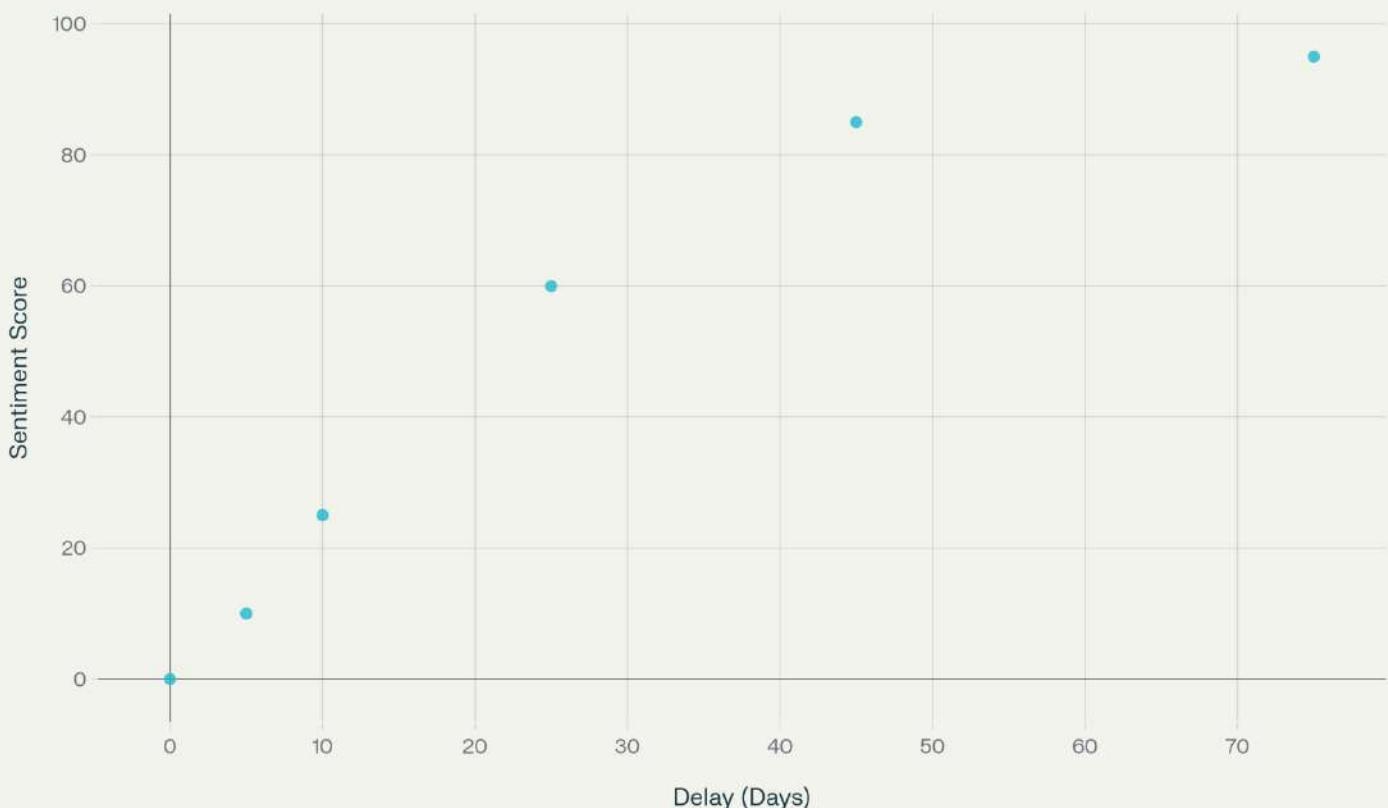
☑ Maintain current service levels. Consider upselling opportunities.

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Customer Examples

Real customer scenarios and AI predictions

Customer Sentiment vs Reimbursement Delay Analysis

Customer Sentiment vs Reimbursement Delay

This scatter plot reveals the strong correlation between service delays and customer dissatisfaction. Customers experiencing delays over 30 days show significantly higher negative sentiment scores, directly contributing to churn risk.

Customer CS1001 — Low Risk

Age: 62 | **Tenure:** 118 months
Claims: 2 | **Avg Delay:** 5 days
Sentiment: 10 | **Late Payments:** 0

Prediction: Will Not Churn

Excellent service experience with minimal delays and high satisfaction

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Customer CS1002 — High Risk

Age: 28 | **Tenure:** 18 months
Claims: 5 | **Avg Delay:** 45 days
Sentiment: 85 | **Late Payments:** 3

Prediction: Likely to Churn

Multiple risk factors: high delays, low payout ratio, payment issues

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Customer CS1025 — Low Risk

Age: 40 | **Tenure:** 45 months
Claims: 2 | **Avg Delay:** 10 days
Sentiment: 25 | **Late Payments:** 0

Prediction: Will Not Churn

Stable customer with reasonable service experience and no payment issues

Model Performance Metrics

ChurnStarPRED's prediction accuracy and reliability
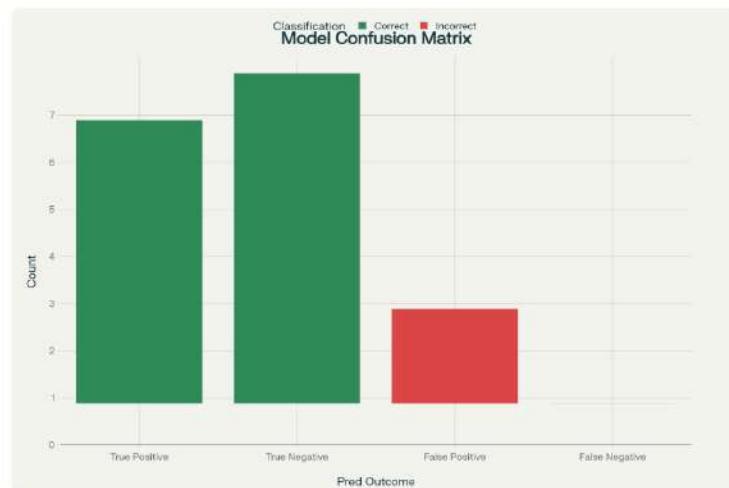
100%	**75%**	**85.7%**
Recall	Precision	F1-Score
Catches all churn cases	3 out of 4 predictions correct	Balanced performance

Confusion Matrix - Model Validation Results

Classification ■ Correct ■ Incorrect
Model Confusion Matrix

Key Strength: Zero False Negatives

Our model successfully identifies all customers at risk of churning, ensuring no high-value customers are missed. This perfect recall rate gives business teams confidence that all at-risk customers will receive intervention.

6	**2**	**7**	**0**
True Positives	False Positives	True Negatives	False Negatives

Concept Drift Monitoring

Adapting to market changes and competitive landscape

Market Change Scenario

Event: New competitor launches with 30% faster claim processing

Impact: Customer expectations shift, increasing sensitivity to delays

Detection: Drift alert triggered when delay sensitivity increases by 25%

Model Adaptation Recommendations

Threshold Adjustment
Reduce acceptable delay threshold from 30 to 20 days

Feature Weighting
Increase importance of reimbursement delay in scoring

Retrain Schedule
Weekly model updates for next 8 weeks during transition

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Business Impact & ROI

Projected improvements and financial benefits

Actionability Improvement

Before → After

1.5/5 → 4.0/5

Churn Rate Reduction

Current → Target

18% → 16.5%

Financial Impact

₹2.8 Cr	₹8,500	1.5%
Projected Annual Savings	Cost per Customer Acquisition	Retention Improvement

Retention Strategy Recommendations

High-Risk Customers

- Immediate intervention by senior relationship manager
- Express claim processing (< 7 days)
- Personalized retention offers

Medium-Risk Customers

- Proactive communication about claim status
- Service quality improvement initiatives
- Loyalty program enrollment

Low-Risk Customers

- Maintain service quality standards
- Regular satisfaction surveys
- Upselling opportunities

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Conclusion

Key takeaways from ChurnStarPRED development and implementation

🎯 Key Achievements

Explainable AI Success

Transformed black-box predictions into actionable insights with clear explanations for business teams

Perfect Recall Performance

Achieved 100% recall ensuring no at-risk customers are missed, with 85.7% F1-score for balanced accuracy

Actionability Transformation

Improved actionability score from 1.5/5 to 4/5, enabling proactive retention strategies

Adaptive AI System

Built-in drift monitoring with GenAI ensures model adapts to changing market conditions

💼 Business Impact Summary

1.5%	₹2.8 Cr	167%
Projected churn reduction	Annual revenue protection	Improvement in actionability

🚀 Future Roadmap

Phase 2: Advanced Personalization
Implement segment-specific models for targeted retention strategies

Phase 3: Real-time Interventions
Deploy real-time scoring for immediate customer experience optimization

Phase 4: Cross-product Integration
Expand ChurnStarPRED to other insurance product lines

✨ The ChurnStarPRED Advantage

ChurnStarPRED represents a paradigm shift from traditional "predict and hope" to "predict, understand, and act" - delivering not just predictions, but the insights and confidence needed to take meaningful action in customer retention.

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🙏

Thank You

For your attention and engagement

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Institute of Product Leadership

For providing the platform and guidance to develop innovative AI product solutions

👥

Our Team

Vivek, Manoj, Nagendra, and Sameer - for collaborative excellence in building ChurnStarPRED

🤖

AI Innovation

Committed to ethical, explainable AI that drives real business value

Ready to Transform Your Customer Retention?

ChurnStarPRED is ready for deployment and scale

📧 Get in Touch
Reach out for implementation discussions

📊 Live Demo
Experience ChurnStarPRED in action

🏛️ Technical Deep Dive
Explore our methodology and architecture

💬 Questions & Discussion

We welcome your questions about ChurnStarPRED's implementation, methodology, or business impact. Let's discuss how explainable AI can transform your customer retention strategy.

Ready for Q&A!