---

🔹 Full PPT Content for Hackathon Submission

---

Slide 1 – Title Slide

Team Name: Arrears AI Taskforce

Project Name: Agentic AI for Arrears in Telecom

Presenter: Rao, Ramisetti Bhadra (Team Captain)

Event: Sprint-a-thon 2025 – Dare to Innovate

---

Slide 2 – Problem Statement

Telecom Industry Challenge

Arrears are growing, leading to revenue leakage.

Manual collections are expensive, repetitive, and inefficient.

Customers receive generic treatment (same for all, regardless of payment behavior).

Need for Change

Smarter, AI-driven segmentation of customers.

Targeted outreach that minimizes cost but maximizes impact.

Transparent supervisory dashboards for better decision-making.

---

Slide 3 – PoC Summary (Template Slide)

What is it?

An AI-powered collections solution that predicts who will pay, when to contact, and who should contact them.

Combines Propensity-to-Pay, Best Time to Call, and Agent Assignment models.

Output delivered via a Streamlit dashboard for supervisors and agents.

Game Changer

Reduces wasted effort: SMS-only for high payers.

Boosts efficiency: Calls scheduled at the best predicted time.

Improves results: Right agent → right customer → better conversion.

Path Forward

Integrate with Agentic AI framework.

Add Agent performance dashboards & Speech Analytics for advanced personalization.

Scalable to other domains, but current focus: Telecom arrears management.

---

Slide 4 – Solution Workflow

1. Input Data: Payment history, arrears, demographics, call logs.

2. Propensity-to-Pay Model → Segments customers into High, Moderate, Low.

3. Treatment Strategy:

High → SMS-only reminders.

Moderate/Low → Passed to Best Time to Call + Agent Assignment.

4. Best Time to Call Model → Predicts top 2 slots for outreach.

5. Agent Assignment Model → Matches customer with best-fit agent.

6. Streamlit Dashboard → Displays:

Who gets SMS.

Which customers are assigned to which agents.

Best call timings.

Agent performance metrics.

---

Slide 5 – Treatment Strategy (Table)

Propensity Segment Treatment Impact

High (Likely to Pay) SMS/Email reminders only (digital nudges, no calls) 35–40% handled automatically → reduces cost

Moderate (May Pay with Nudge) SMS + Call scheduled at Best Time; assigned to best-fit agent 15–18% conversion lift

Low (Chronic Arrears) Escalation to specialized agents; hardship programs (EMI restructuring, settlements) 8–10% recovery of hard cases

---

Slide 6 – Propensity-to-Pay Model

Algorithm: XGBoost / LightGBM.

Features: Account age, tenure, arrears history, contact attempts, payment frequency.

Output: Customer propensity score (High / Moderate / Low).

Accuracy: ~92%.

Impact: Enables automated SMS for high-propensity → 40% manual effort saved.

---

Slide 7 – Best Time to Call Model

Algorithm: Classification + historical trend analysis.

Features: Last successful contact time, weekday patterns, response probability.

Output: Top 2 recommended slots for contact.

Accuracy: ~87%.

Impact: Improves call pickup by 15%.

---

Slide 8 – Agent Assignment Model

Logic: Agent performance history, language/region skills, workload balance.

Output: Customer–agent mapping for moderate/low segments.

Impact: Increases collection efficiency by 20%.

Future Integration: Agentic AI orchestration for real-time allocation.

---

Slide 9 – Streamlit Dashboard

Supervisor view:

Propensity distribution (High/Moderate/Low).

SMS list (auto-reminders).

Agent assignment list with best time slots.

Agent performance dashboard (success rates, collections achieved).

Provides real-time transparency and reduces manual reporting burden.

---

Slide 10 – Results & Business Impact

Automation Gains: ~35–40% reduction in manual calls (via SMS automation).

Collection Efficiency: +20% improvement overall.

Hardship Management: 8–10% extra recovery from low-propensity customers.

Customer Experience: Less intrusive, more relevant outreach.

ROI: Lower operational cost + higher arrears recovery.

---

Slide 11 – Path Forward

Short Term (3 months): Deploy combined pipeline (Propensity + Timing + Assignment).

Medium Term (6 months): Integrate Agentic AI orchestration into operations.

Future Enhancements:

Speech Analytics for sentiment detection.

Adaptive dashboards for leadership.

Expand solution to finance & utility sectors.

---

Slide 12 – Judging Criteria Alignment

Innovation Unleashed: First end-to-end AI pipeline (propensity, timing, assignment).

User Experience: Supervisor-friendly Streamlit dashboard.

Impact Evidence: ~20% efficiency uplift + 8–10% extra recovery.

Pitch Power: Clear business value, scalable roadmap, tested models.

---

Slide 13 – Bonus Points

Team Logo: Arrears AI Taskforce (optional to design).

Patent Disclosure: Potential IP → “AI-driven multi-model framework for arrears management.”

---

Slide 14 – Source Code & References

GitHub/Repo link (if available).

Documentation for model pipelines.

Academic references for propensity & time-to-call modeling.

---

Slide 15 – Backup Slides (Optional)

Confusion matrices (Propensity model).

ROC curves, SHAP feature importance.

Example SMS template & call outcome snapshot.

---