



COLLECTING INTELLIGENTLY: FEWER CALLS, MORE CHEQUES

Abstract

Collections on delinquent mortgages can often get exasperating, requiring multiple follow-up calls with customers. But they can also get exhilarating – when done right. That's what James Gibson, Head of Collections Strategy at a top 10 US bank discovered when he brought in an Infosys BPM team to streamline his collections processes. This case details how the team, deploying classical AI models to segment customers based on historical payment behaviour, and automating many of the earlier indiscriminate follow-up calls, delivered close to \$1.3 Mn in automated collections.



A headache from too many calls

James Gibson is an SVP at a top 10 U.S. commercial bank and heads its collections strategy. He manages mortgage collections operations, the bank's contact centres, and their analytics alignment, and is responsible for improving collection metrics such as cure rates, roll rates, and recoveries.

For quite some time, James had been concerned about the inefficiencies in his collections function. While delinquent customers were being reminded about their payment obligations using a broad outreach method, once their accounts crossed the payment due date by 30 days, agents would start calling them up to follow-up. However, the follow-up calls were being done without any segmentation, targeting, or prioritization. James knew that with this indiscriminate

approach most of his agents were expending their efforts inefficiently.

With business growth over time further amplifying the inefficiencies, the collections model was increasingly becoming unsustainable. The uniform approach to following up with all delinquent customers was not only wasting agent effort, it came with high operational costs and had also slowed down recovery cycles overall. Of late, with the bank's leadership also pushing for analytics-driven decisioning, James realized that it was high time he set things right. He began looking out for technology support to scientifically segment customers based on their predicted payment likelihood.

After a long RFP and due diligence process involving several service providers, James

struck up a partnership with Infosys BPM based on its impressive track record of leveraging cutting-edge technologies to drive business outcomes. He was soon in discussions with Nalini Kumari, Infosys BPM's lead for the transformation effort, explaining the historical challenges and his end goals of optimizing resource utilization and improving recovery cycles. He then handed her an initial mandate to support his collections operations, customer service, and reporting.

Once the team was firmly in the saddle, the partnership quickly evolved from just execution to its more strategic aspects, including analytics-led insights and decision support. James and Nalini were in complete agreement that her team should eventually co-own business outcomes as they drove their transformation initiatives.

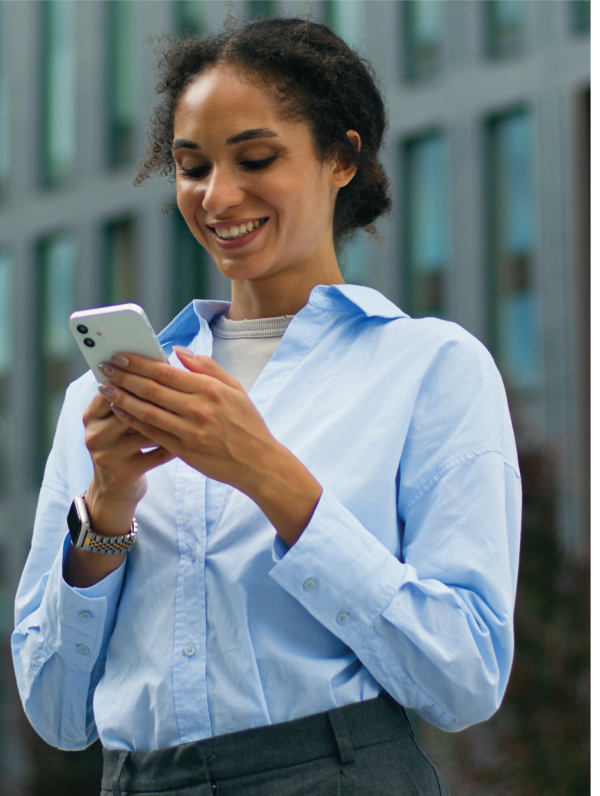
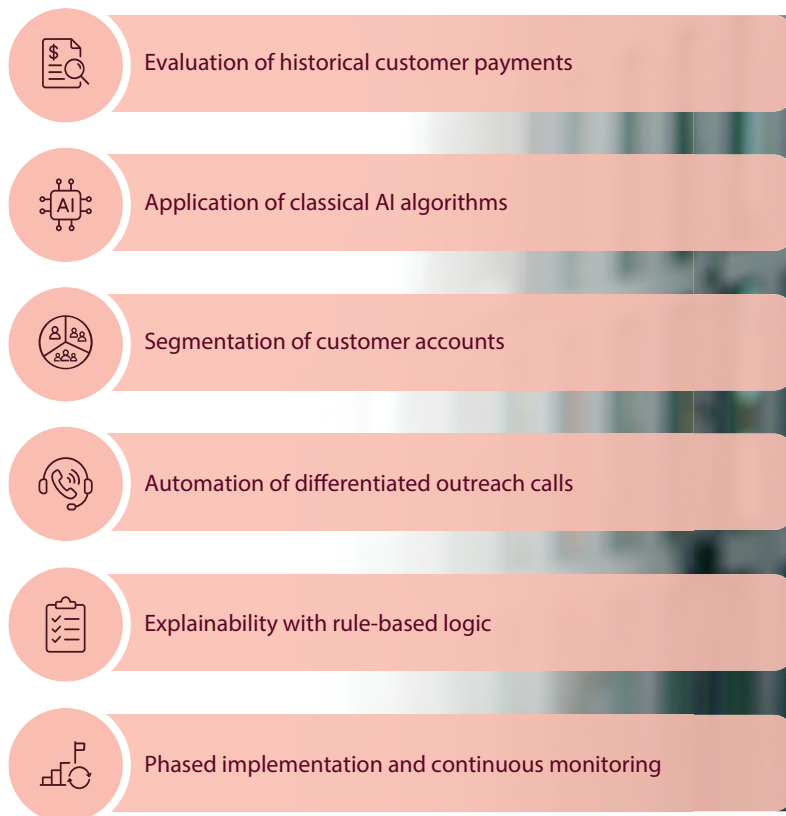
Statistically remodelling the phone book

Nalini and her team began transforming the bank's collection processes by first evaluating more than fifty payment-related features which they gleaned from historical data. These included customer

credit attributes such as FICO scores and origination vs. current balance, behavioural indicators such as payment history and promise-to-pay adherence, risk indicators such as roll rates and repeat delinquency

patterns, and customer behaviour on channels such as IVR, web portals, automated clearing houses (ACH), and agent-assisted payments.

Approach Summary



Then the team applied classical AI algorithms like principal component analysis (PCA) on all these inputs. The AI models soon identified the “big patterns” in the datasets, revealing the key features influencing the payment behaviour of the customer population. Next, they applied AI classification models to automatically segment the delinquent customer accounts in the 30–44 Days Past Due (DPD) bucket and identify subsets with a higher predicted payment propensity. Using SQL workflows, they routed these subsets to automated IVR outreach calls, while routing the others to the traditional agent-led engagement. This AI-enabled differentiated treatment strategy, then supported the collection team’s decision-making on which customers to prioritize or deprioritize, greatly improving targeting precision.

Meanwhile, to maintain transparency and trust with stakeholders, Nalini had ensured that her team complemented the AI models with rule-based logic derived from the model’s outcome, for high explainability and business acceptance. This was critical because initially several stakeholders had concerns that any automated calls would negatively impact customer experience and recovery rates. There had also been scepticism regarding the reliability and explainability of model-driven decisions, as well as concerns regarding the ability of the solution to meet compliance and regulatory considerations. So, throughout the development and deployment of the solution, Nalini continued to address all these concerns through pilot validations, transparent logic, and gradual rollouts with continuous monitoring.

Through these stages, the project faced its fair share of challenges. There had been issues with data quality and potential bias in the historical data which had to be managed. So, Nalini and her team undertook multiple iterations to finalize the dependent variable for the model. Then, there was resistance to the change from operations teams who were concerned about the impact of AI on their roles. In addition, integrating analytics into daily workflows required behavioural and process changes at the agent level. However, Nalini working closely with James, aligned all the stakeholders who would be affected, implementing the solution in phases and instituting strong performance tracking mechanisms. And so, Nalini and her team eventually built and deployed the solution to everyone’s satisfaction.

When the cheques just flow in

With the newly rolled-out AI-solution effortlessly identifying customers with a higher propensity to repay, James' collections agents were engaging many

of these customers through IVR calls and focusing on the others through their regular calls. Soon, everyone realized how much

less effort they had to expend overall to meet their recovery targets, and how much this improved operational efficiency.

Key benefits



~\$1.3 Mn in automated collections



~13% reduction in agent-driven calls



\$558 K in recoveries through redeployment



But then, the solution not only reduced the effort required for the outbound calls leading to increased productivity but also led to higher payments through the auto diallers. So, it led to higher collections and enhanced overall recovery by also utilizing the saved bandwidth of agents. James was further delighted with how he now also had actionable insights on customer payment habits.

In terms of sheer numbers, James realized \$1.3 Mn in annualized collection payments just through the targeted automated

diallers. He also saw approximately 13% reduction in agent-driven outbound calls. And so, through redeploying this additional manpower he now had gained a further \$558,000 in annualized recoveries. Apart from the greatly improved agent productivity and cost efficiency, the organization also now had a scalable, reusable segmentation framework for long-term value.

It's no wonder that with the transformation initiative's successful delivery of both cost

savings and revenue uplift, James soon gained recognition as a leader driving AI and analytics led transformation within the organization. It not only strengthened his credibility with leadership but also positioned him as a champion of innovation and data-driven decision-making. It's safe to say, with Nalini and team continuing to drive further transformation, James is likely to gain greater strategic influence and expanded responsibilities in driving future initiatives.

**Names have been altered to preserve the identities of the people involved.*

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