

# Synchrony IVR Optimization

Illini BA (Seunggyun Shin, Hyunji Lee, Audrey Jung)



# Business Problem

Synchrony is currently providing IVR system for clients and willing to **improve the efficiency of the IVR system** in addressing customer call reasons. By increasing performance of IVR system, the company can reduce costs by minimizing calls that require conversation with agents.



# Analytic Problem

- **Calls transferred to agents**

Calculate proportion of transferred calls and analyze patterns from calls

- **Re-calls**

Investigate in which circumstances customers make re-calls.

- **Customer satisfaction**

Through findings, suggest effective and actionable solutions to improve customer experience



# Data Pre-processing

- **Weekly Call Records**

- **Focus on “mos”**

Assuming IVR quality should not vary by client background

- **Create column based on objectives**

Extract timestamp

Transferred

Caused Recall

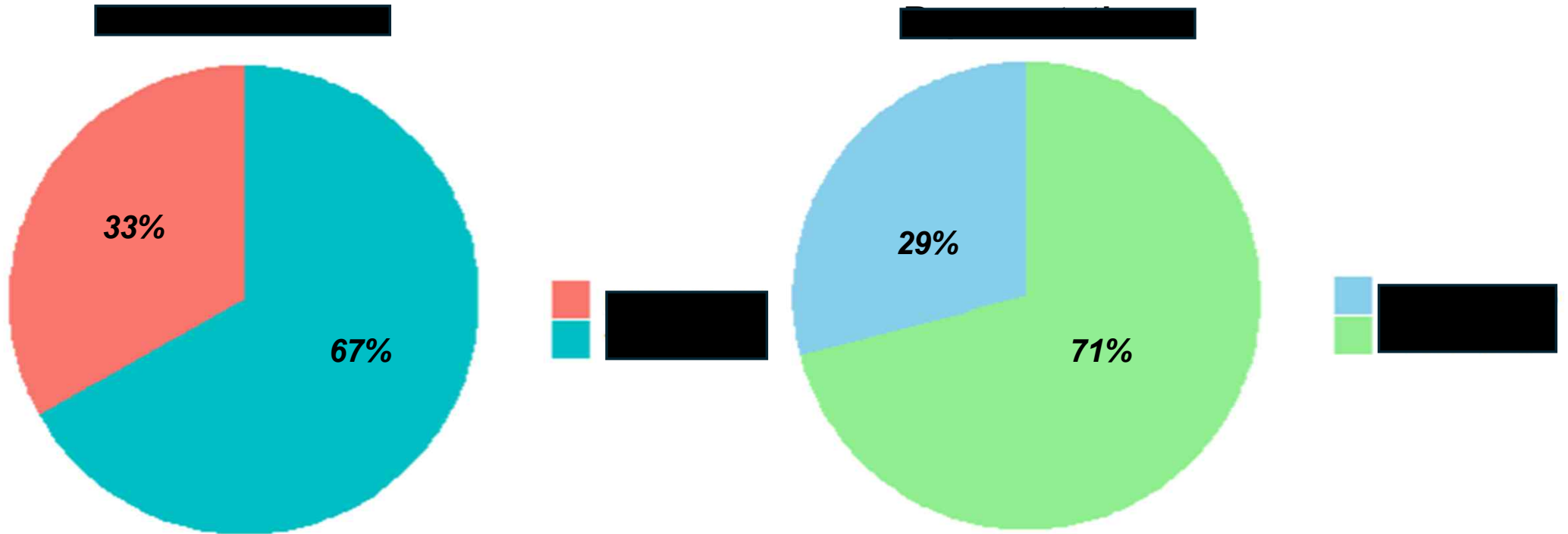
Length of mos (e.g. IAPPTR—3)

Binary columns for frequent mos

mos before IVRends (Or before TR)

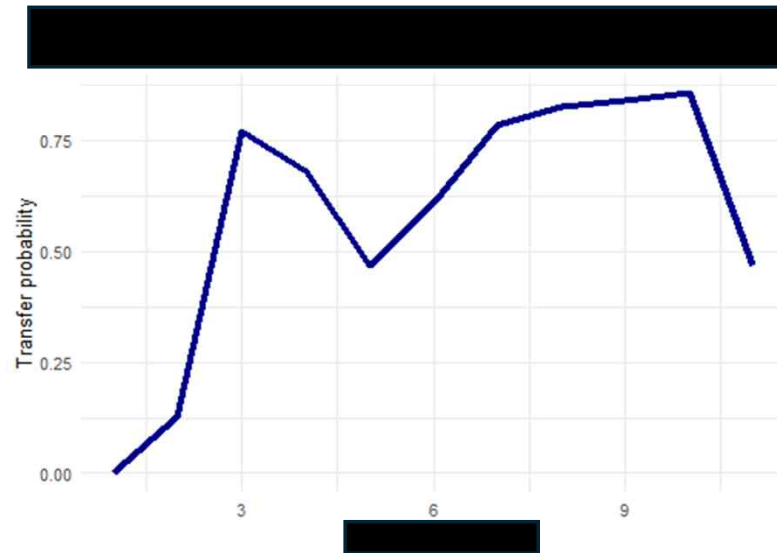


# Transferred Calls

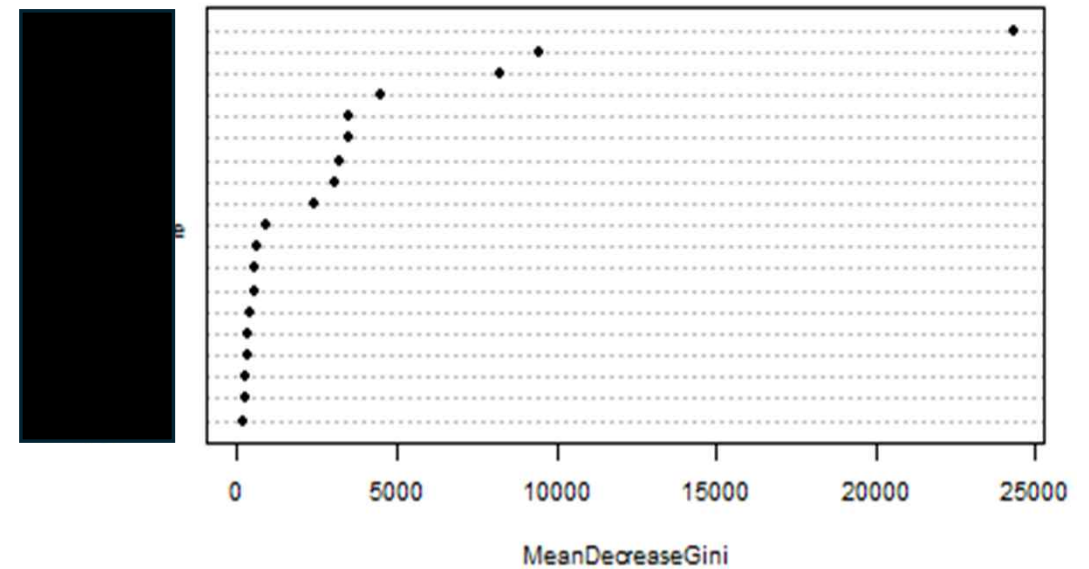


# Transferred Calls

- █ % of calls found right menu for reasons on IVR

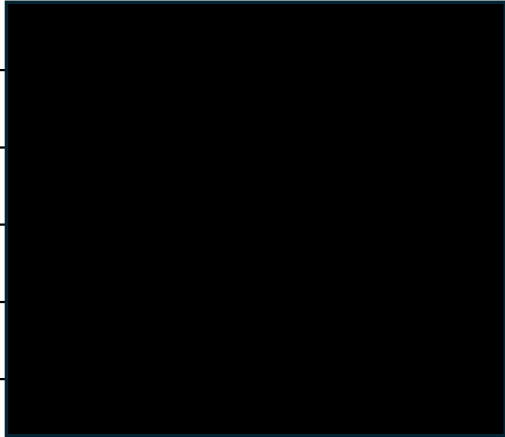


Random forest importance plot (96% fit)



# Transferred Calls

- **98% of calls found adequate sessions in IVR that matches the reason of call**  
→ Finding desired menu is not a problem

Mos Menu used before transferred		
		<b>40202 (39%)</b>
		<b>36926 (36%)</b>
		<b>7849 (8%)</b>
		<b>3963 (4%)</b>
		<b>2383 (2%)</b>
		<b>2032 (2%)</b>

# Re-calls

- **Re-calls**

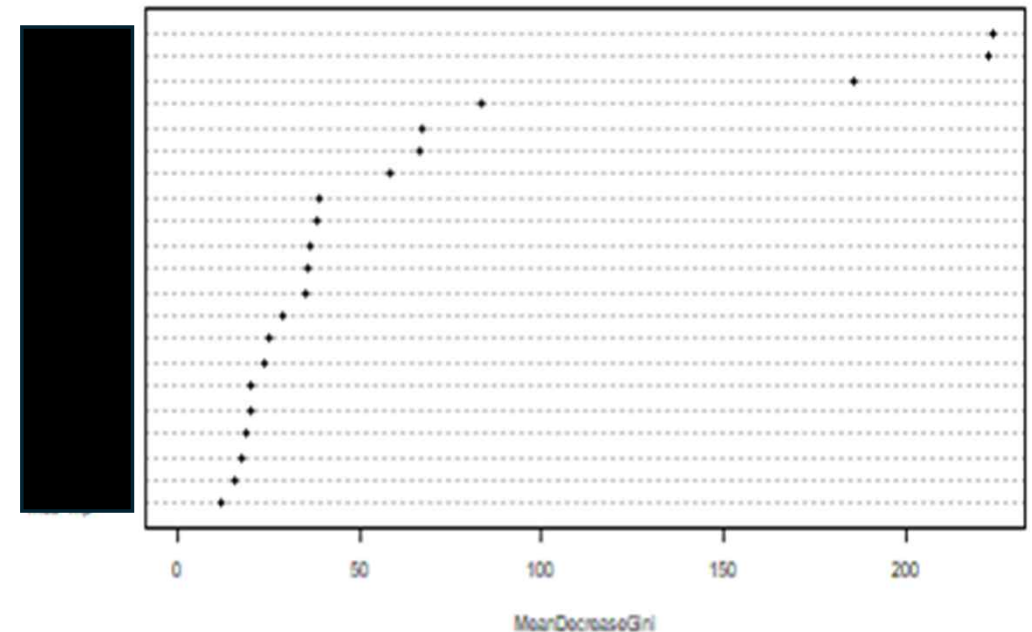
Assume multiple calls with same serial and call reason on same date “Re-calls”

- **Calls followed by re-call: [REDACTED]%**
- **Re-calls even after talking to rep: [REDACTED]%**

[REDACTED]  
[REDACTED] % of calls can be reduced by agent first-hand

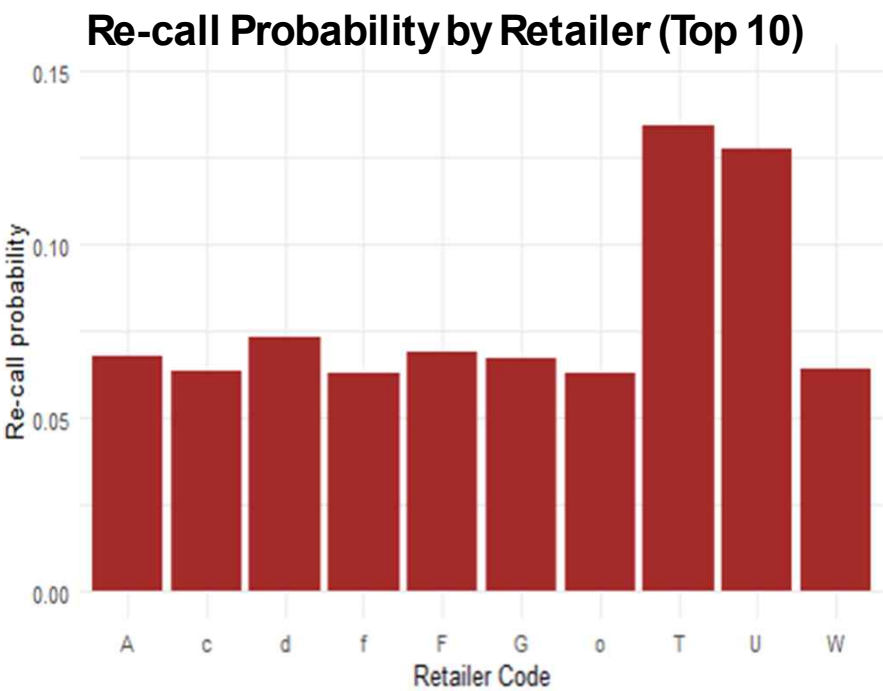
- [REDACTED] % Recall # by case < 5 (Max: 24)

Random forest importance plot (94.4% fit)






# Re-calls

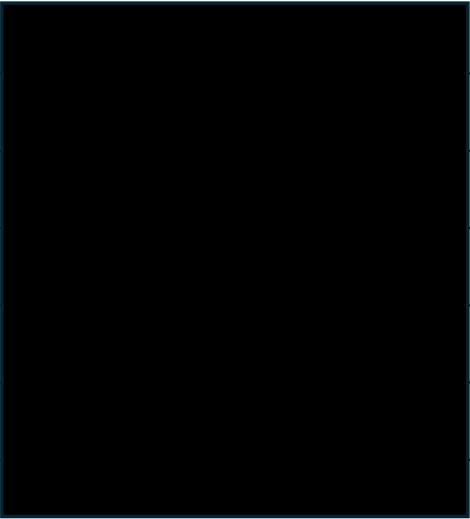


Reasons for Re-calls		
		40202 (39%)
		36926 (36%)
		7849 (8%)
		3963 (4%)
		2383 (2%)
		2032 (2%)
		1706 (2%)



# Business Solutions

Mos Menu used before transferred		
		40202 (39%)
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		1706 (2%)

Most of the calls are payment related.

 Update the IVR of these two Mos () to prevent recalls and transfers.

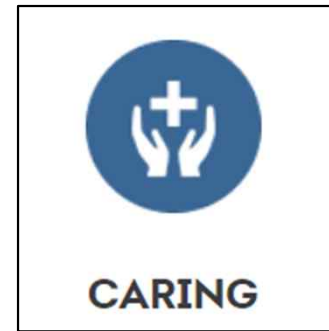
# Business Outcome

Although this solution only affects those who re-call even after they connect to an agent, it is [REDACTED] % of the whole data for just 5 days.

- Number of calls
  - [REDACTED] \* [REDACTED] % = [REDACTED] calls
- Number of agents needed
  - [REDACTED] agents
- Costs
  - [REDACTED] agents \* [REDACTED] hours \* \$[REDACTED] = \$[REDACTED] per week

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Reducing re-calls can reduce costs and free up more agents to assist customers with more complex requests.





# Q&A