

1. Which are the top three variables in your model which contribute most towards the probability of a lead getting converted?

Answer: Top Three Variables in our Logistic Regression Model are:

- **Total Time Spent on Website (3.8479):**
 - This is the strongest predictor. It makes sense because time spent reflects genuine interest and engagement.
- **Occupation - Working Professional (3.6304):**
 - This segment of leads has the highest likelihood of conversion, possibly due to their readiness to invest in courses for career growth.
- **Lead Origin - Lead Add Form (3.0655):**
 - Leads acquired via the "Lead Add Form" show high intent, likely due to directly filling out forms indicating interest.

2. What are the top 3 categorical/dummy variables in the model which should be focused the most on in order to increase the probability of lead conversion?

Answer: From categorical/dummy variables, the top three based on coefficient magnitude are:

Variable	Coefficient	Actionable Insight
Occupation: Working Professional	3.6304	Focus on targeting working professionals through marketing campaigns or personalized messaging.
Lead Origin: Lead Add Form	3.0655	Enhance and optimize the "Lead Add Form" as it produces highly convertible leads.
Last Activity: Had a Phone Conversation	2.2985	Engage more leads via phone conversations, as this activity significantly increases conversion likelihood.

3. X Education has a period of 2 months every year during which they hire some interns. The sales team, in particular, has around 10 interns allotted to them. So during this phase, they wish to make the lead conversion more aggressive. So they want almost all of the potential leads (i.e. the customers who have been predicted as 1 by the model) to be converted and hence, want to make phone calls to as much of such people as possible. Suggest a good strategy they should employ at this stage.

For an aggressive lead conversion strategy during the 2-month intern period, X Education should focus on maximizing **sensitivity (recall)**—ensuring that most potential

leads predicted as 1 by the model are identified and contacted. Here's a tailored approach:

Recommended Strategy

1. Adjust Model Cutoff to Increase Sensitivity

- Lower the cutoff probability (e.g., from **0.5 to 0.3**) to classify more leads as potential converters.
- At a **0.3 cutoff**, your metrics show:
 - Sensitivity = **0.8426** (84.26% of potential leads are identified).
 - Specificity = **0.7524**, which is reasonable given the focus on aggressive outreach.
- This will ensure more potential leads are contacted without ignoring too many high-value leads.

2. Prioritize Leads by Conversion Probability

- Rank leads predicted as 1 by their **probabilities** (model output).
- Start with the top-scoring leads (highest conversion probability) and progressively move down the list.
- This helps allocate time and resources effectively to maximize returns.

3. Leverage Interns for Outreach

- **Divide Leads:** Distribute leads among interns based on their conversion probabilities.
- **Assign Scripts:** Use personalized scripts based on key features (e.g., occupation, last activity) to enhance engagement.
 - Example: Leads with "Working Professional" as occupation or "Had a Phone Conversation" as last activity should receive tailored pitches.

4. Optimize Call Strategy

- Use data insights to time calls:
 - Leads with "**SMS Sent**" or "**Phone Conversation**" activities may respond better during similar time slots.
- Experiment with calling windows (e.g., lunch hours for working professionals).

5. Monitor and Reallocate Daily

- Track conversion rates in real-time to measure intern performance and lead quality.
- Redistribute unresponsive leads to other interns to maximize coverage.

6. Additional Engagement Channels

- Supplement phone calls with:
 - **SMS/Emails:** Send follow-ups post-call for those who express interest.
 - **Chatbots:** Engage low-priority leads via automated chats to convert them passively.

Implementation Framework

Phase	Action	Outcome
Week 1	Train interns, distribute leads, and start calls	Early insights into conversion effectiveness.
Weeks 2-3	Prioritize leads based on performance	Higher coverage and conversion rates.

Phase	Action	Outcome
Week 4-8	Review, reallocate, and refine strategy	Maximize lead-to-customer conversion.

This approach ensures efficient use of intern resources while capturing as many potential converters as possible. Let me know if you'd like specific tools or processes to track and manage this effort!

4. Similarly, at times, the company reaches its target for a quarter before the deadline. During this time, the company wants the sales team to focus on some new work as well. So during this time, the company's aim is to not make phone calls unless it's extremely necessary, i.e. they want to minimize the rate of useless phone calls. Suggest a strategy they should employ at this stage.

When X Education reaches its quarterly target early, the focus should shift from maximizing conversions to **minimizing unnecessary phone calls** while maintaining a reasonable conversion rate. This requires **increasing specificity**, ensuring that only the most likely-to-convert leads are contacted. Here's the recommended strategy:

Recommended Strategy

1. Adjust Model Cutoff to Increase Specificity

- Raise the cutoff probability (e.g., from **0.5 to 0.6 or 0.7**) to focus on leads with the highest likelihood of conversion.
- At a **0.7 cutoff**, your metrics show:
 - Specificity = **0.9483** (94.83% of leads classified as 0 are correctly identified).
 - Sensitivity = **0.5094**, which is acceptable since fewer leads need to be called.

2. Focus on High-Probability Leads

- Use the model's probabilities to rank and segment leads.
- Call only those leads with probabilities above the cutoff.

3. Leverage Other Engagement Channels

- For leads below the cutoff, avoid phone calls and use cost-effective engagement strategies:
 - **Email Campaigns:** Send personalized follow-ups or offers.
 - **Automated Chatbots:** Use chat tools to passively gauge interest.
 - **SMS/WhatsApp:** Send quick reminders or updates to low-probability leads.

4. Analyze Past Conversion Patterns

- Identify patterns in previous data to refine high-conversion segments:
 - For example, prioritize leads with specific "Last Activities" like **"SMS Sent"** or **"Phone Conversation"**, which indicate higher intent.

5. Minimal Contact Workflow

- Introduce a tiered workflow:
 - **High-probability leads:** Phone calls + follow-ups.

- **Moderate-probability leads:** Automated emails/SMS only.
- **Low-probability leads:** No contact until the next cycle.

6. Implement a Feedback Loop

- Continuously monitor outcomes to adjust the cutoff dynamically if unnecessary calls persist.

Implementation Framework

Phase	Action	Outcome
Week 1	Raise cutoff, identify high-probability leads	Reduced call volume without loss of quality.
Weeks 2-3	Engage low-priority leads via automated channels	Optimize intern workload and time.
Week 4 onwards	Monitor lead response rates and refine the strategy	Minimized unnecessary calls.

Key Metrics to Track

- **Conversion Rate per Call:** Should remain high, indicating calls are focused on quality leads.
- **Engagement Rates** (for emails/SMS): Monitor to assess the effectiveness of alternate channels.

This strategy minimizes unnecessary phone calls while maintaining a streamlined conversion process during downtime. Let me know if you'd like help implementing or analyzing these recommendations!