# Churn Report — Key Findings

## Key findings in plain language

 **By “Contract”**: customers on **Month-to-month** churn most often (42.7%); least often — **Two year** (2.8%). Risk is ~**15.1×** higher.

 **By “OnlineSecurity”**: customers with **No** churn most often (41.8%); least often — **No internet service** (7.4%). Risk is ~**5.6×** higher.

 **By “TechSupport”**: customers with **No** churn most often (41.6%); least often — **No internet service** (7.4%). Risk is ~**5.6×** higher.

 **By “InternetService”**: customers on **Fiber optic** churn most often (41.9%); least often — **No** (7.4%). Risk is ~**5.7×** higher.

 **By “PaymentMethod”**: customers paying by **Electronic check** churn most often (45.3%); least often — **Credit card (automatic)** (15.2%). Risk is ~**3.0×** higher.

 **By “PaperlessBilling”**: customers with **Yes** churn more often (33.6%); **No** churns less (16.3%). Risk is ~**2.1×** higher.

## KDE — distributions of key numeric features

Below are the density plots (KDE) for the most variable numeric features. Peaks and “tails” indicate typical values and potential problem areas.

|  |  |  |  |
| --- | --- | --- | --- |
| MonthlyCharges | tenure | SeniorCitizen |  |

# Who to retain first (risk profiles)

* **Month-to-month + no OnlineSecurity + no TechSupport.**  
  Reason: nothing ties them in; issues accumulate → easier to leave.
* **Fiber optic** (especially on month-to-month).  
  Reason: higher price and stronger quality sensitivity.
* **Electronic check** (no autopay).  
  Reason: more friction and psychologically easier to cancel.

# Quick wins (1–4 weeks)

1) **Move customers to longer contracts**

* **Target:** all month-to-month.
* **Offer:** 12/24 months + “1 month free” or a 3-month discount.
* **Playbook:** present at first bill and 7–10 days before billing.

2) **Service bundles**

* **Target:** customers without OnlineSecurity/TechSupport.
* **Offer:** “Internet + Security + Support” at a price just above standalone internet.
* **Bonus:** free 1–3 month trial of security/support.

3) **Autopay by default**

* **Target:** Electronic check payers.
* **Offer:** −3–5% for 3 months or cashback for enabling autopay (card/bank).
* **UX:** make it “one-click” in the account and emails/SMS.

4) **For fiber customers — proactive quality**

* **Monitoring:** speed/loss monitoring, auto-ticket on SLA events.
* **Compensation:** auto credit/extra data on degradation; free tech visit.

# Process changes (operations)

 **Onboarding 0–60 days:** churn peaks here.  
 Script: welcome call/chat, “speed checklist,” Wi-Fi setup, bundle + autopay offer.

 **Three triggers before churn:**

1. drop in usage/login activity;
2. two+ speed failures/outages in a month;
3. cancelling add-on services.  
   At each trigger — send a personalized offer (see above).

# Personalized offers by segment

 **Price-sensitive:** month-to-month + electronic check + low traffic  
→ discount for a yearly contract, basic security pack “included.”

 **Quality-sensitive:** fiber + tech incidents + no TechSupport  
→ free engineer visit/router replacement + 3 months of TechSupport.

 **“Internet-only” users:** no OnlineSecurity/TechSupport  
→ bundle with a symbolic surcharge, auto-renewal.

# Communication & UX

 **Soft cancellation:** during off-boarding offer “pause for 1–2 months,” plan downgrade, or switch to another package.

 **Win-back:** for leavers <90 days — special campaign “restore price/discount + no migration fees.”

 **Simple emails/pushes:** one screen, one button: “Enable Autopay” / “Get 3 months of TechSupport.”

# How to operationalize the model (if already trained)

 Weekly scoring; create a “top-N at-risk” list (e.g., top 5–10% by probability).

 **Action rules:**

* if **p(churn) ≥ 0.5** and month-to-month → call + 12/24-month offer;
* if **0.3 ≤ p < 0.5** and no OnlineSecurity → email/push with 3-month trial;
* if **fiber** & **2+ incidents** → auto-ticket + compensation.

 **Threshold selection:** optimize economics, not accuracy (contact cost vs retention value).

# What to measure (KPIs & targets)

 Churn rate (monthly/quarterly) — target reduction of X p.p.

 Retention lift in focus segments (month-to-month, no-addons, fiber, e-check).

 Share of autopay among at-risk customers (increase to Y%).

 Share of customers on 12/24-month contracts (increase to Z%).

 NPS/CSAT of fiber customers after proactive interventions.