# 📊 Summary and Recommendations

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## 🎯 Objective:

Analyze customer churn patterns in the telecom sector using Python. Focused on factors like **payment methods**, **contract types**, **tenure**, and **demographics** to find out what leads to higher churn rates and how to improve customer retention.

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## 🔍 Key Insights & Findings:

### ✅ Contract Type and Churn

- 📌 **42%** churn for month-to-month contracts
- 📌 **11%** for one-year, and **3%** for two-year contracts
- **Implication:** Longer contracts help reduce churn significantly.

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### ✅ Payment Methods and Churn

- 📌 **45%** churn for customers using **electronic checks**
- 📌 Only **15–18%** churn for credit cards, bank transfers, and mailed checks
- **Implication:** Promote more trusted and convenient payment methods.

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### ✅ Churn by Tenure

- 📌 **50%** churn for customers with **<1 year** tenure
- 📌 Drops to **35%** for 1–3 years, and **15%** after 3 years
- **Implication:** Focus on early engagement in the customer journey.

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### ✅ Churn by Internet Service Type

- 📌 **30%** churn for **Fiber Optic** users
- 📌 **20%** churn for **DSL** users
- **Implication:** Investigate service quality for Fiber Optic customers.

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### ✅ Senior Citizens and Churn

- 📌 **41%** churn among senior citizens (65+)
- 📌 **26%** churn among non-seniors
- **Implication:** Create dedicated support for senior customers.

📈 **Visualizations & Data Insights:**

- 📊 **Bar charts and line graphs** clearly show:
    - Higher churn with electronic checks
    - Drop in churn as customer tenure increases
- 📌 Reinforces need for **early loyalty programs** and **secure payment options**

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💡 **Recommendations:**

1. ✅ **Promote Long-Term Contracts**
   Encourage customers to choose 1–2 year plans with discounts or benefits.
2. ✅ **Improve Payment Method Options**
   Guide users away from electronic checks toward more secure methods like cards.
3. ✅ **Focus on Early Customer Engagement**
   Offer onboarding benefits or support during the first year.
4. ✅ **Support Senior Citizens**
   Design personalized plans, helplines, or offers for elderly users.