### MINI CASE 1: "Stopping the Churn Before It Starts: Building an AI Retention Assistant"

#### **Scenario**

You’ve joined the **Customer Strategy Team** at Telco, a mid-sized telecom provider facing intense pressure from new market entrants and shrinking customer loyalty. Over the last two quarters, customer churn has spiked, particularly among month-to-month users, and leadership is demanding action.

The Head of Customer Experience wants to pilot an **AI-powered “Retention Assistant”** that can identify customers most at risk of leaving. The goal: empower service agents to proactively intervene with tailored offers and better support.

Your manager hands you a **customer churn dataset** and asks you to develop a **first version of the prototype** using **no-code AI tools like WEKA or KNIME**.

#### **Your Role**

You’re acting as an AI analyst and solution builder. Your task:

* Explore patterns in the churn data
* Build a **classification model** to predict which customers are likely to leave
* Create a **working AI prototype** that could help frontline agents spot and prioritize at-risk customers

#### **Business Objective**

Build an AI-powered **Customer Retention Assistant** that flags high-risk customers, enabling smarter, proactive retention strategies and reducing churn-related revenue loss.

### MINI CASE 2: "How Much Is This House Worth? Building an AI-Powered Pricing Tool"

#### **Scenario**

You’ve joined the **Market Intelligence Unit** at PropTrend Advisors, a real estate consulting firm that helps developers and realtors make smarter pricing decisions. With markets fluctuating, clients want tools that can predict home prices based on features like size, neighborhood, and condition, and explain why some homes are priced higher than others.

Your team is piloting **AI-driven prototypes** to show clients what's possible, and you’ve been asked to build a first version using no-code/low-code AI tools like **WEKA or KNIME**. The idea is to demonstrate how machine learning can power smarter pricing and decision support in real estate.

#### **Your Role**

You’re acting as both a business analyst and AI solution builder. Your task:

* Analyze the Ames Housing dataset
* Build a **regression model** to predict home sale prices
* Wrap your model into a **prototype AI tool** that could assist pricing teams in real estate

#### **Business Objective**

Create an AI-powered pricing prototype that predicts housing prices and identifies key price drivers, enabling smarter pricing strategies, fairer valuations, and better client recommendations.

### MINI CASE 3: "Will We Have Enough Stock? Forecasting Warehouse Demand with AI"

#### **Scenario**

You’ve joined the **Supply Chain Optimization Team** at FlowCart Logistics, a regional warehouse and distribution company that manages inventory for multiple government and financial agencies. The operations manager has flagged a recurring issue: inaccurate daily demand forecasts are leading to **stockouts** on some days and **excess inventory** on others, both of which increase costs.

To solve this, the team is exploring **AI-driven forecasting tools** to better anticipate daily order demand based on historical patterns. Your job is to build a **forecasting prototype** using **no-code AI tools like WEKA or KNIME** to predict how many orders the warehouse can expect on a given day.

#### **Your Role**

You’re acting as the AI prototype designer for logistics forecasting. Your task:

* Explore historical daily order data
* Build a **time series forecasting model** to predict demand
* Package your model into a prototype that helps the warehouse team plan staffing and stock more efficiently

#### **Business Objective**

Build an AI-powered **Warehouse Demand Forecasting Tool** that predicts the number of daily orders, reducing overstock and understock situations, and improving operational efficiency.