**Business Requirements Document (BRD)**

**Project Title:** Sales Forecasting by Product Line  
**Prepared For:** Sales Leadership, FP&A, RevOps  
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**Date:** April 2025

**1. Business Objective**

Sales, Marketing, and Finance leadership require a forecast of bookings over the next 6 months by product line in order to:

* Allocate marketing and sales resources effectively
* Set and track performance targets by product
* Align headcount and territory planning with expected demand

This analysis is intended to enable **proactive decision-making** based on likely future performance, not just historical results.

**2. Problem Statement**

The organization currently operates without a formal forecasting mechanism beyond spreadsheet extrapolations.

* Manual projections are inconsistent, prone to bias, and difficult to scale
* There is no standard way to account for seasonality, noise, or product-specific trends
* Leaders lack confidence in forward-looking numbers

**3. Project Scope**

* **Inputs:** Monthly bookings data by product line (January 2021 to December 2023)
* **Granularity:** Monthly
* **Forecast Horizon:** 6 months (January 2024 to June 2024)
* **Output:**
  + Forecast plot with uncertainty intervals
  + Data table of expected values by month
  + Business-friendly summary of key takeaways and recommendations

Future enhancements may include:

* Regional or channel-level segmentation
* Driver-based inputs (marketing spend, rep activity, renewals)
* Daily granularity and near-real-time updates

**4. Modeling Approach**

The project will use:

* **Prophet**: For interpretable, seasonality-aware forecasting
* **XGBoost**: As a machine learning model to compare predictive performance

Performance of both models will be evaluated using out-of-sample forecast accuracy (e.g., RMSE, MAPE).

**5. Success Criteria**

* Forecasts are within acceptable error margins on holdout data
* Stakeholders understand the assumptions and limitations
* Output enables actionable business decisions (e.g., adjust targets, reallocate budget)

**6. Stakeholders**

* **Sales Operations**: Planning and quota-setting
* **FP&A**: Revenue planning and modeling
* **Marketing**: Campaign planning and ROI optimization
* **Product**: Understanding demand and product mix shifts

**7. Deliverables**

* Forecasting notebook (code and commentary)
* Visualizations and tables
* Written recommendations (report format)
* GitHub repository with clean structure, README, and documentation