

Revenue Forecasting, Scenario Planning, and Business Intelligence Dashboard

Client portfolio report prepared for DataScienceConsultingPro.com

Executive Summary

This report summarizes a Python-based revenue forecasting portfolio project. The project demonstrates how historical revenue transactions can be cleaned, analyzed, summarized with pivot tables, visualized with charts, and converted into conservative, base, and growth forecast scenarios for business planning.

The project is designed for business owners, founders, finance teams, executives, SaaS companies, e-commerce brands, agencies, and professional service firms that need clearer revenue visibility for budgeting, hiring, investor updates, and growth planning.

Project Aim

The aim of this project is to demonstrate a practical revenue forecasting workflow using Python. The workflow supports historical revenue review, revenue KPI analysis, product and segment breakdowns, trend analysis, forecast scenario modelling, and client-ready reporting.

Dataset Overview

Item	Details
Rows after cleaning	30,155
Date range	2021-01-01 to 2024-12-31
Revenue measure	Net Revenue
Main business dimensions	Product Category, Customer Segment, Region, Sales Channel
Forecast horizon	Next 12 months

Methodology

- Loaded raw transaction-level revenue data.
- Audited data quality, missing values, and duplicate order IDs.
- Cleaned blank sales channels, missing discount values, and duplicate records.
- Created month, quarter, year, and revenue type features.
- Built pivot tables for product, segment, region, channel, and monthly revenue analysis.
- Created revenue trend and forecast scenario charts.
- Built a simple forecasting model using trend and month-based seasonality.
- Prepared conservative, base, and growth forecast scenarios.

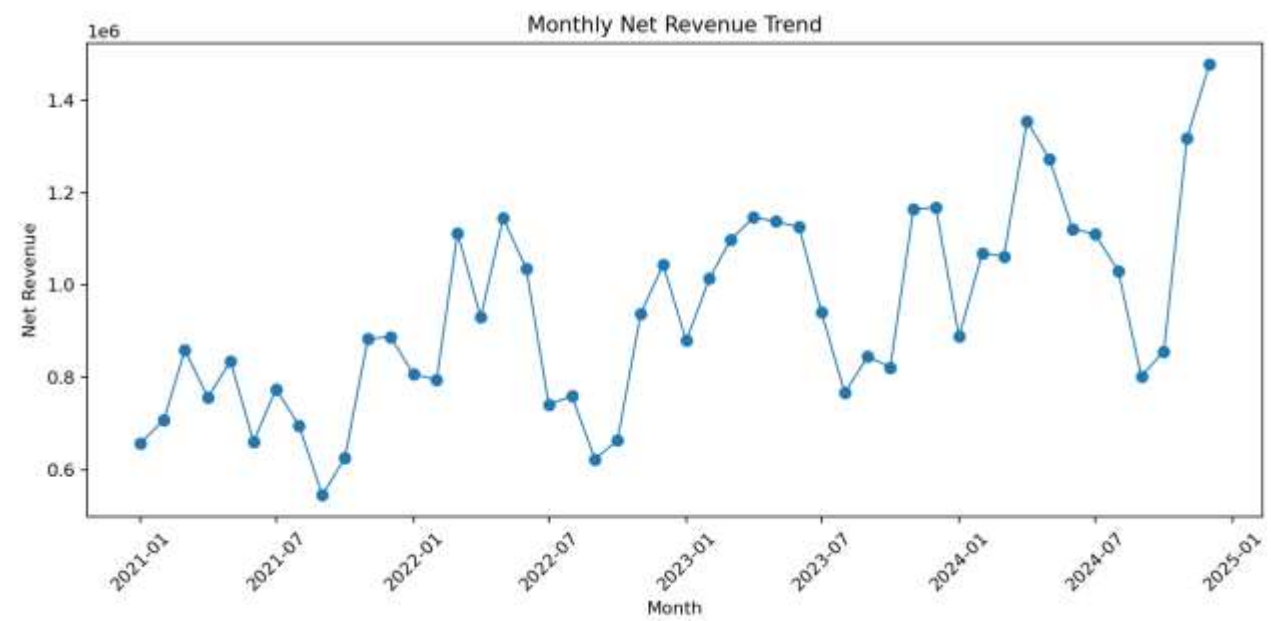
Key Revenue KPIs

Metric	Value
Total Net Revenue	\$44,964,128
Total Gross Revenue	\$56,901,438
Number of Orders	30,155
Average Net Revenue per Order	\$1,491.10
Refund / Credit Records	806

Date Range	2021-01-01 to 2024-12-31
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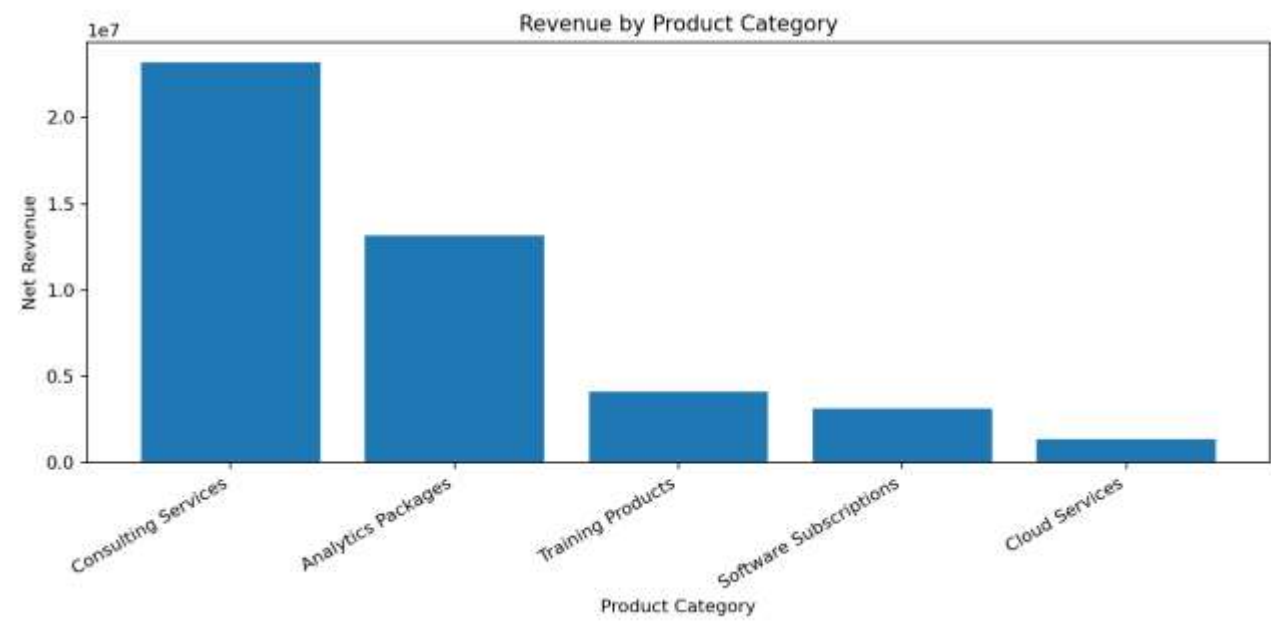
Historical Revenue Trend

The monthly trend chart shows how revenue has changed over time. This helps leadership understand growth, volatility, seasonal movements, and planning risks before relying on a forecast.



Revenue by Product Category

Product category analysis identifies which offers contribute most to revenue. This helps managers decide which products deserve more sales attention, investment, or deeper forecasting.

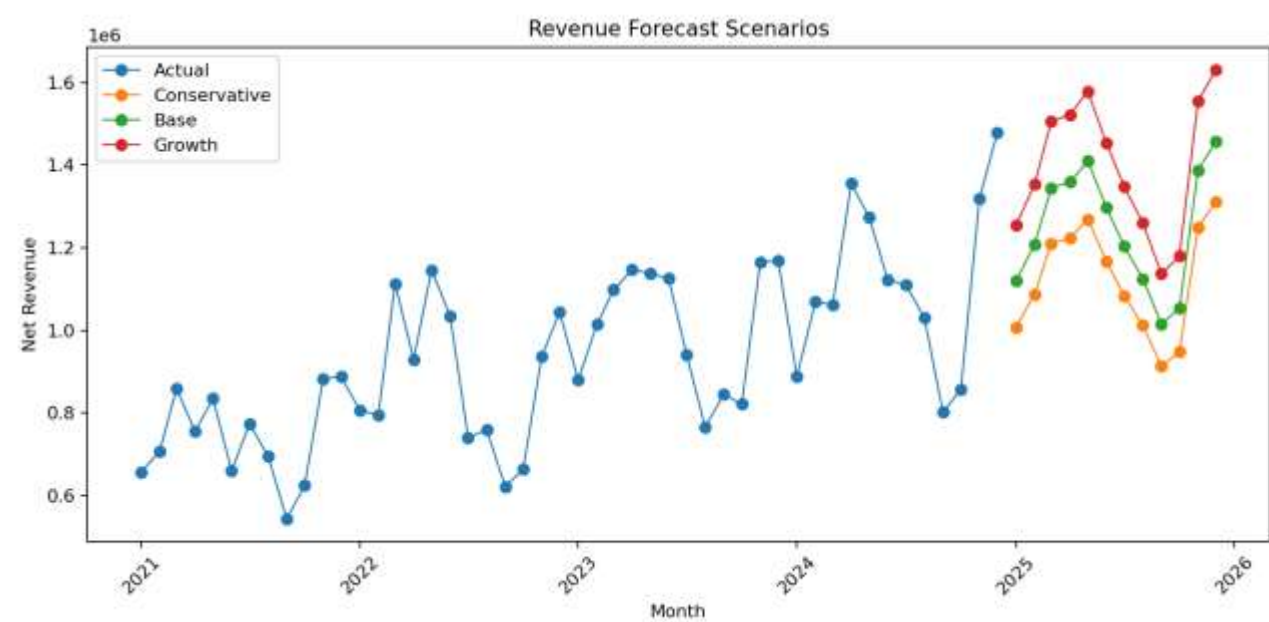


Product Category	Net Revenue
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Consulting Services	23,203,672.27
Analytics Packages	13,154,006.25
Training Products	4,100,231.73
Software Subscriptions	3,124,964.76
Cloud Services	1,381,252.90

Forecast Scenario Results

The forecast uses historical trend and monthly seasonality patterns to estimate the next 12 months of revenue. Three scenarios are provided to support cautious, expected, and growth planning decisions.



Scenario	Next 12 Months Forecast	Planning Meaning
Conservative	\$13,483,278	Cautious planning case
Base	\$14,981,420	Expected planning case
Growth	\$16,779,191	Optimistic growth case

Business Recommendations

- Use the base forecast as the main planning reference, while keeping the conservative case for risk-aware budgeting.
- Review high-performing product categories and customer segments for growth opportunities.
- Use monthly revenue patterns to plan sales campaigns, staffing, and marketing spend.
- Update the forecast monthly as new revenue data becomes available.
- Use the dashboard-ready outputs later in Power BI for executive reporting and interactive monitoring.

Limitations

This forecast is a planning tool, not a guarantee. Actual revenue may change because of market conditions, pricing, customer behavior, sales execution, campaigns, competition, or external business factors. For a real client project, the forecasting method should be selected based on the client's available data, business model, and decision context.

Files Included in This Portfolio Pack

File	Purpose
01_raw_revenue_forecasting_data.csv	Raw transaction-level revenue data
02_revenue_forecasting_jupyter_notebook_with_pivot_tables.ipynb	Python workflow with pivot tables, charts, and forecast model
03_revenue_forecasting_interactive_dashboard.html	Browser-based interactive revenue dashboard
04_revenue_forecasting_client_report.docx	Plain-language client report

Prepared by DataScienceConsultingPro.com