Online Retail(UCI)- Executive Summary (Dec 2010 - Dec 2011)

Category
All

Country
All

Show Insights

Hides Insights

Sales Amount	Quantity Sold	Total Order	Average Order Value
$10.27M	5.58M	19770	$519

Active Customers	Customers MoM %	Monthly Growth	Repeat Customer Rate	Churned Customers %
5705			49.59%	13.65%

Dec 2010 | Jan 2011 | Feb 2011 | Mar 2011 | Apr 2011 | May 2011 | Jun 2011 | Jul 2011 | Aug 2011 | Sep 2011 | Oct 2011 | Nov 2011 | Dec 2011

All Countries

United Kingdom

Other Countries
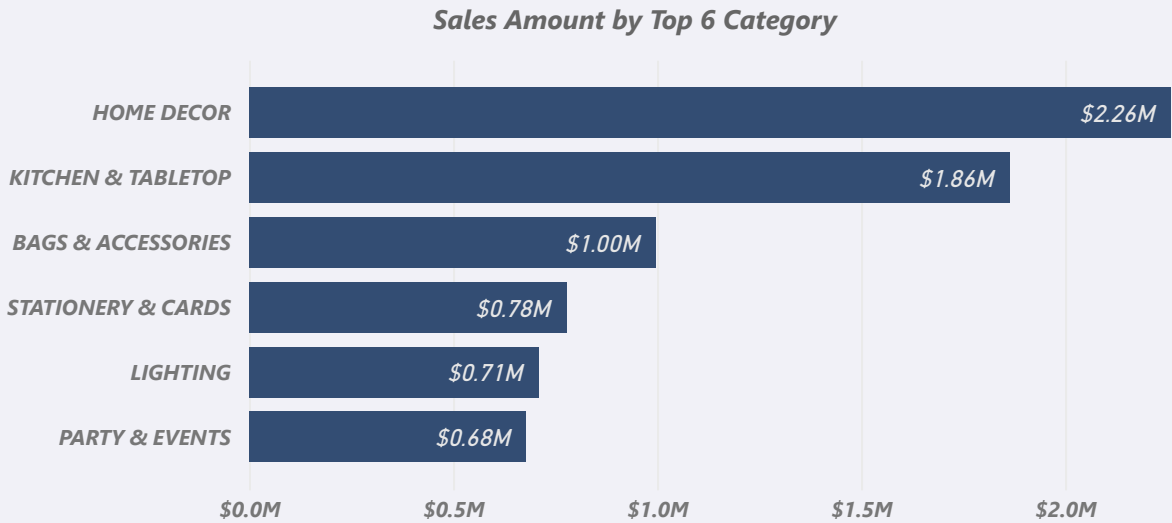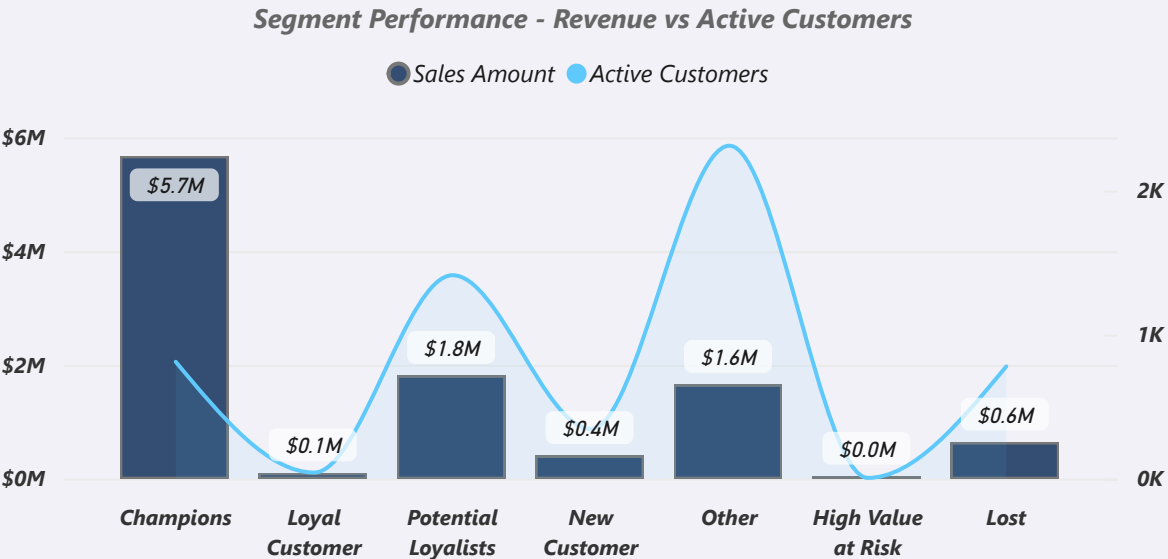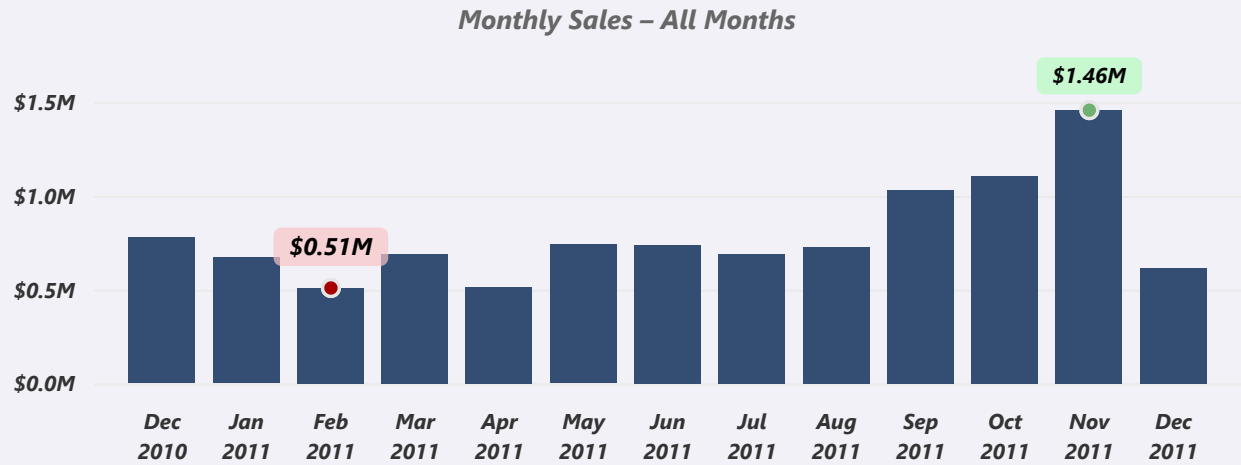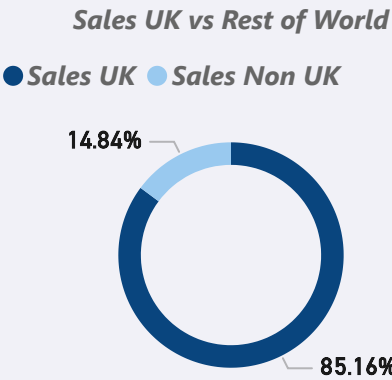
Sales UK vs Rest of World

● Sales UK ● Sales Non UK

14.84%

85.16%

Monthly Sales – All Months

$1.46M

$0.51M

$1.5M
$1.0M
$0.5M
$0.0M

Dec 2010 | Jan 2011 | Feb 2011 | Mar 2011 | Apr 2011 | May 2011 | Jun 2011 | Jul 2011 | Aug 2011 | Sep 2011 | Oct 2011 | Nov 2011 | Dec 2011

Segment Performance - Revenue vs Active Customers

● Sales Amount ● Active Customers

$6M
$4M
$2M
$0M

$5.7M
$0.1M
$1.8M
$0.4M
$1.6M
$0.0M
$0.6M

2K
1K
0K

Champions | Loyal Customer | Potential Loyalists | New Customer | Other | High Value at Risk | Lost

Sales Amount by Top 6 Category

Category	Sales
HOME DECOR	$2.26M
KITCHEN & TABLETOP	$1.86M
BAGS & ACCESSORIES	$1.00M
STATIONERY & CARDS	$0.78M
LIGHTING	$0.71M
PARTY & EVENTS	$0.68M

$0.0M | $0.5M | $1.0M | $1.5M | $2.0M

Monthly Performance

Monthly Insight

In Nov 2011, sales grew by 31.7% versus October, while active customers increased by 20.9% to 1,769. The repurchase rate was 75.6%, and average orders per customer rose to 1.55, one of the highest levels in the year. Revenue growth was driven by both a larger active base and higher purchase frequency, with very strong retention and most activity coming from existing customers.

Sales Amount	Total Order	Total Customers	Order Per Customer
$1.46M	2749	5705	1.55

Active Customers	New Customers	Returning Customers	Customers MoM %	Monthly Growth
1769	432	1337	20.9%	31.7%

Dec 2010 | Jan 2011 | Feb 2011 | Mar 2011 | Apr 2011 | May 2011 | Jun 2011 | Jul 2011 | Aug 2011 | Sep 2011 | Oct 2011 | **Nov 2011** | Dec 2011

Monthly Trend - Sales vs Orders

● Sales Amount ● Total Order

2749

Nov 2011

Daily Sales – Nov 2011

$111K

$21K

$100K

$50K

1 2 3 4 6 7 8 9 10 11 13 14 15 16 17 18 20 21 22 23 24 25 27 28 29 30
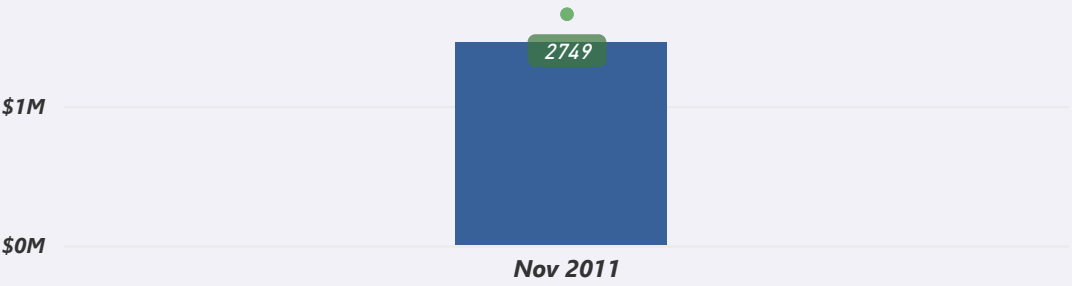
New vs Returning Customers by Month

● New Customer % ● Returning Customers %

Nov 2011 | 24% | 75.58%

0% | 50% | 100%
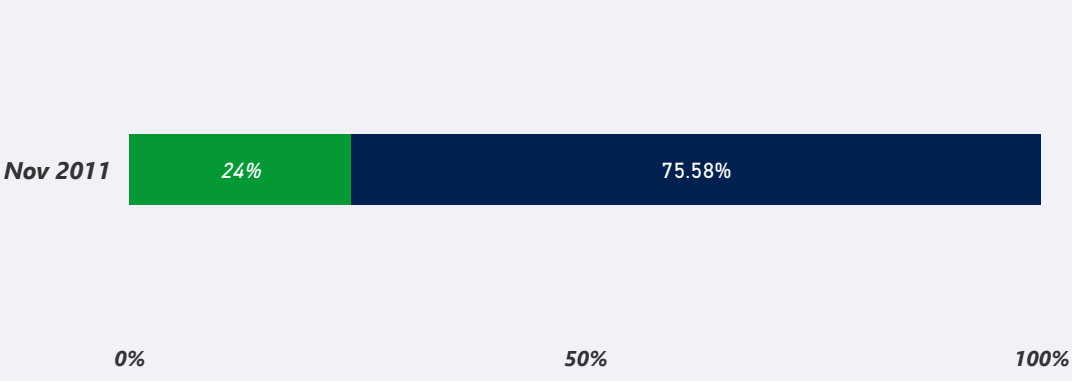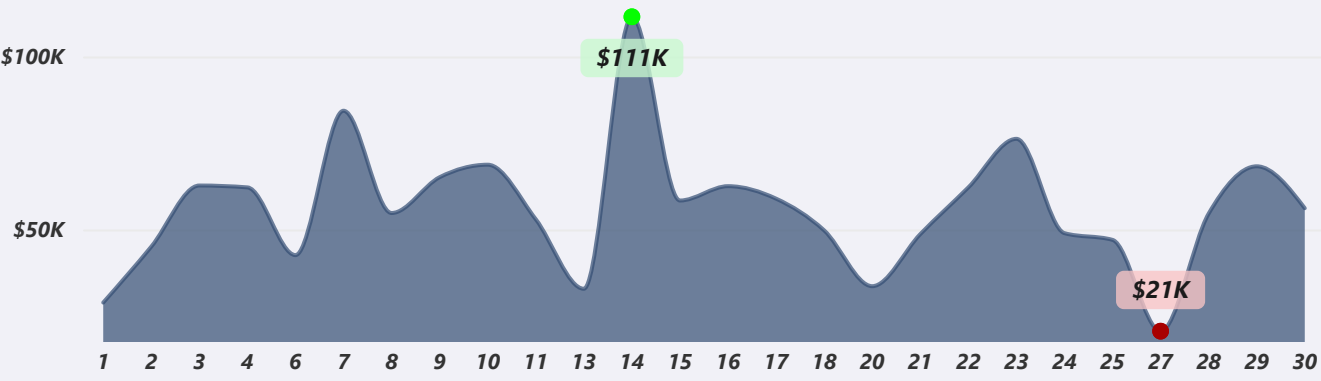
Month-over-Month Sales Growth %

-24.3% 35.8% -25.3% 43.6% 42.0% 31.7% -57.8%

0%

-100%

Jan 2011 | Feb 2011 | Mar 2011 | Apr 2011 | May 2011 | Jun 2011 | Jul 2011 | Aug 2011 | Sep 2011 | Oct 2011 | Nov 2011 | Dec 2011
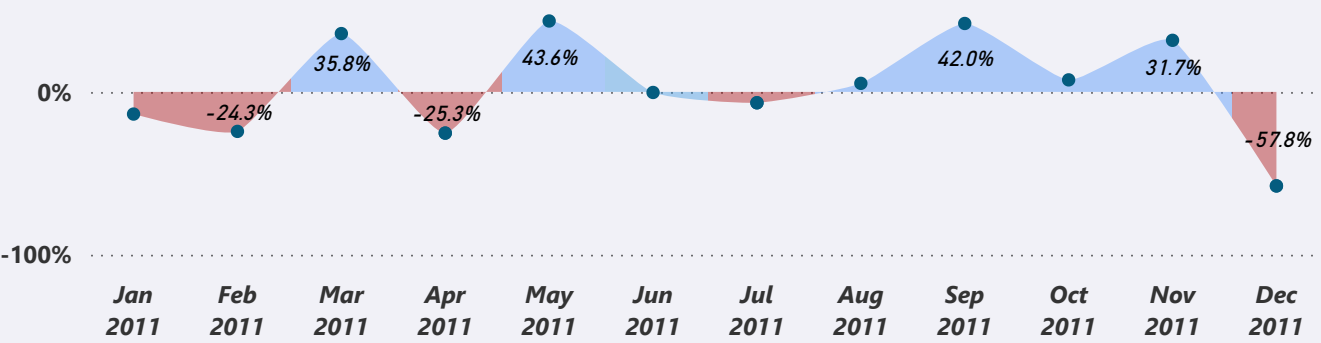
Product Performance - Monthly View

Months
All

Category
All

Country
All

Sales Amount	Quantity Sold	Average Product Price
$10.27M	5.58M	$1.8

Active Products	Active Customers	Avg Customers per Product	Top 20 Products Sales %
3795	5,705	1.50	13.54%

Top 10 Category by Sales Amount and Quantity Sold

● Sales Amount ● Quantity Sold

Category	Sales Amount	Quantity Sold
HOME DECOR	$2.3M	1,012K
KITCHEN & TABLETOP	$1.9M	780K
BAGS & ACCESSORIES	$1.0M	581K
STATIONERY & CARDS	$0.8M	884K
LIGHTING	$0.7M	360K
PARTY & EVENTS	$0.7M	360K
RIBBONS & CRAFT	$0.7M	325K
STORAGE & ORGANISATION	$0.5M	163K
KEYRINGS & BADGES	$0.4M	257K
TOYS & GAMES	$0.2M	179K

Top 10 Products by Sales

Product	Sales
REGENCY CAKESTAND 3 TIER	$174K
PAPER CRAFT , LITTLE BIRDIE	$168K
WHITE HANGING HEART T-LIGHT HOLDER	$106K
PARTY BUNTING	$100K
JUMBO BAG RED RETROSPOT	$94K
MEDIUM CERAMIC TOP STORAGE JAR	$82K
RABBIT NIGHT LIGHT	$67K
PAPER CHAIN KIT 50'S CHRISTMAS	$65K
ASSORTED COLOUR BIRD ORNAMENT	$59K
CHILLI LIGHTS	$54K

Customer Segment

Sales Amount	Total Customers	Order Per Customer	AOV per Customer	Average CLV_RFM
$10.27M	5705	3.47	$581	$1,428

Dec 2010 | Jan 2011 | Feb 2011 | Mar 2011 | Apr 2011 | May 2011 | Jun 2011 | Jul 2011 | Aug 2011 | Sep 2011 | Oct 2011 | Nov 2011 | Dec 2011

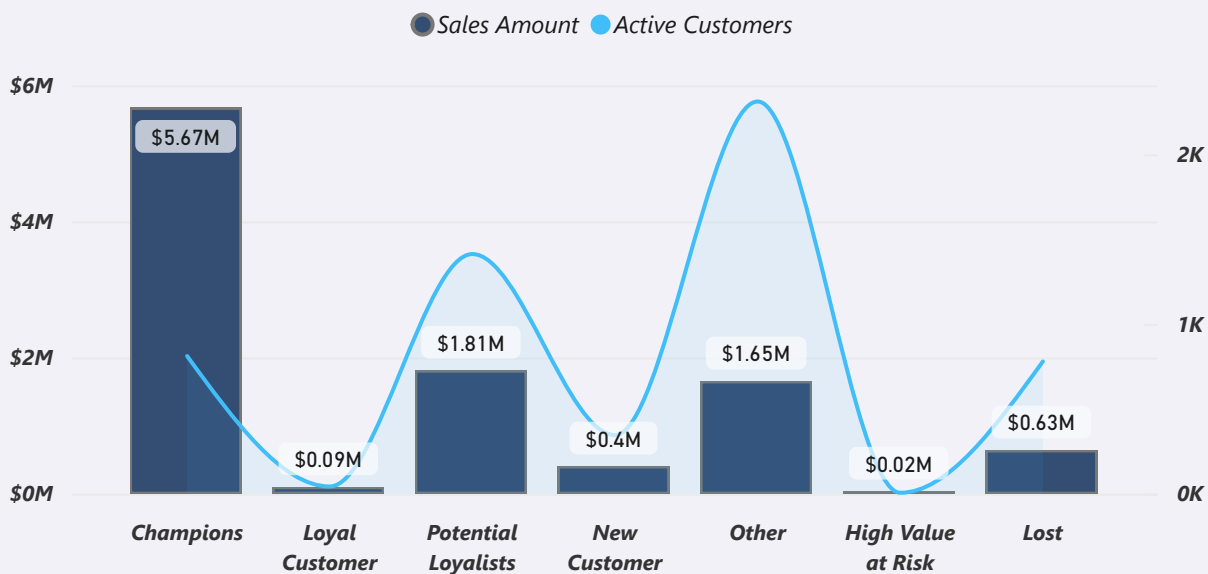Country: All

Customer Risk Distribution

Low Risk	Medium Risk
3186	1474
	High Risk
	1045
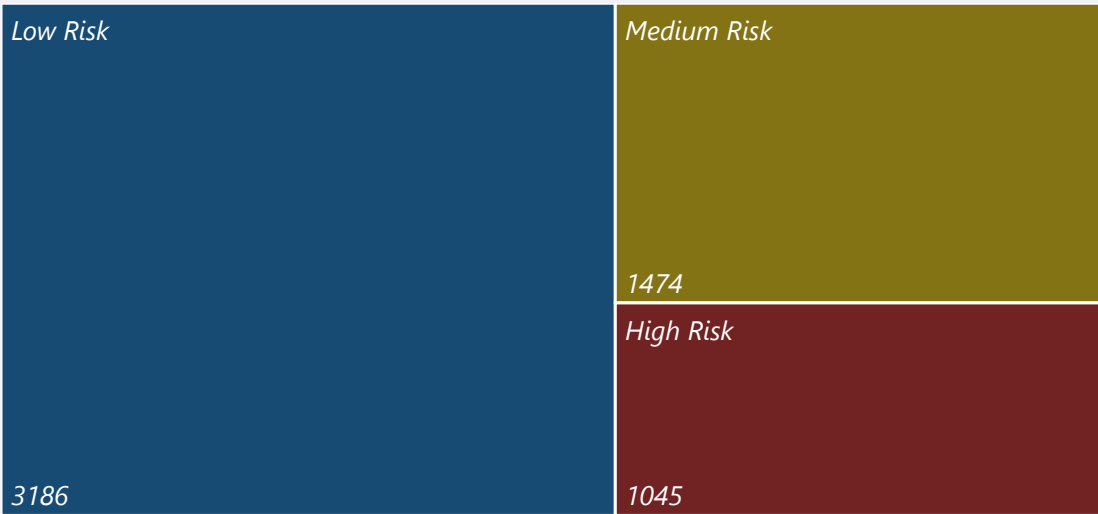
Segment	Total Customers	Segment Revenue %	Segment Customers %	Average AOV	Average CLV_RFM	Sales Amount
Champions	811	55.2%	14.22%	$449	$6,693	$5,666,701
Loyal Customer	42	0.9%	0.74%	$301	$1,669	$93,674
Potential Loyalists	1412	17.6%	24.75%	$423	$914	$1,806,880
New Customer	345	3.9%	6.05%	$1,154	$774	$398,134
Other	2311	16.1%	40.51%	$577	$361	$1,648,701
High Value at Risk	5	0.2%	0.09%	$423	$3,049	$22,107
Lost	779	6.2%	13.65%	$781	$312	$633,904
Total	5705	100.0%	100.00%	$581	$1,428	$10,270,101

RFM Segment-Avg Recency vs Avg Frequency(Size=Monetary)

Avg Frequency Score(1=Low, 5=High)

High Value at Risk · Loyal Customer · Champions · Potential Loyalists · New Customer · Lost · Other

Avg Recency Score(1 = Old, 5 = Recent)

Segment Performance - Revenue vs Active Customers

● Sales Amount ● Active Customers

Champions	Loyal Customer	Potential Loyalists	New Customer	Other	High Value at Risk	Lost
$5.67M	$0.09M	$1.81M	$0.4M	$1.65M	$0.02M	$0.63M

Monthly Deep Dive & Drivers

Sales Amount	Total Order	Order Per Customer	Active Customers	Monthly Growth
$1.46M	2749	1.55	1769	31.7%

New Customers	Returning Customers	Customers MoM %
432	1337	20.9%

Dec 2010 | Jan 2011 | Feb 2011 | Mar 2011 | Apr 2011 | May 2011 | Jun 2011 | Jul 2011 | Aug 2011 | Sep 2011 | Oct 2011 | **Nov 2011** | Dec 2011

Country: All

Country ×	Segment ×	Category ×
United Kingdom	Champions	

Sales Amount $1,457,309

United Kingdom $1,285,838	Champions $620,630	CANDLES & HOLDERS $9,987
Netherlands $25,640	Loyal Customer $593	CHRISTMAS DECOR $11,093
EIRE $29,838	Potential Loyalists $285,924	GARDEN & OUTDOOR $5,246
Germany $24,253	New Customer $271,722	HOME DECOR $165,971
France $29,217	Other $106,969	JEWELLERY $4,943
Australia $6,641		KEYRINGS & BADGES $16,107

Daily Sales – Nov 2011

● Sales Amount ● Total Order

Daily sales bar/line chart with notable values: $29K, $111K, $33K, $34K, $76K, $21K, $56K (Sales Amount); 76, 136, 134, 135, 107, 57 (Total Order). X-axis: Day (0 to 30).

Product Portfolio Analysis

Months
All

Category
All

Country
All

Active Products	Active Customers	Avg Revenue per Active Products	Avg Customers per Product
3,795	5,705	$2,706	1.50

Sales Amount	Quantity Sold	Total Products	Average Product Price	Top 20 Products Sales %
$10.27M	5.58M	3795	$1.8	13.54%

Monthly Sales – All Months
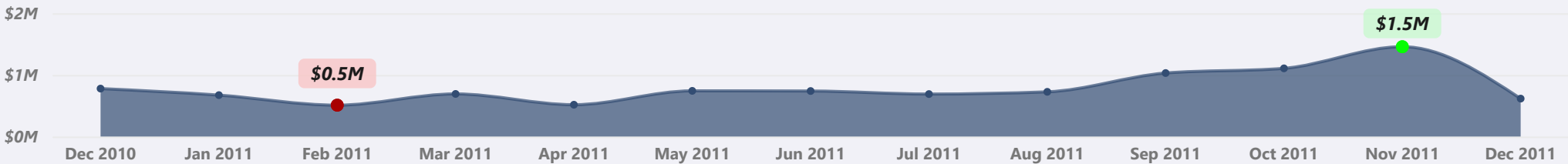
Category Portfolio-Revenue vs Volume

Avg Sales: $0.54M
Avg Quantity Sold: 294K

Category
- BAGS & ACCESSORIES
- BATH & BEAUTY
- CANDLES & HOLDERS
- CHRISTMAS DECOR
- GARDEN & OUTDOOR
- HOME DECOR
- JEWELLERY
- KEYRINGS & BADGES
- KITCHEN & TABLETOP
- LANTERN
- LIGHTING
- PARTY & EVENTS
- RIBBONS & CRAFT
- STATIONERY & CARDS
- STORAGE & ORGANISATION
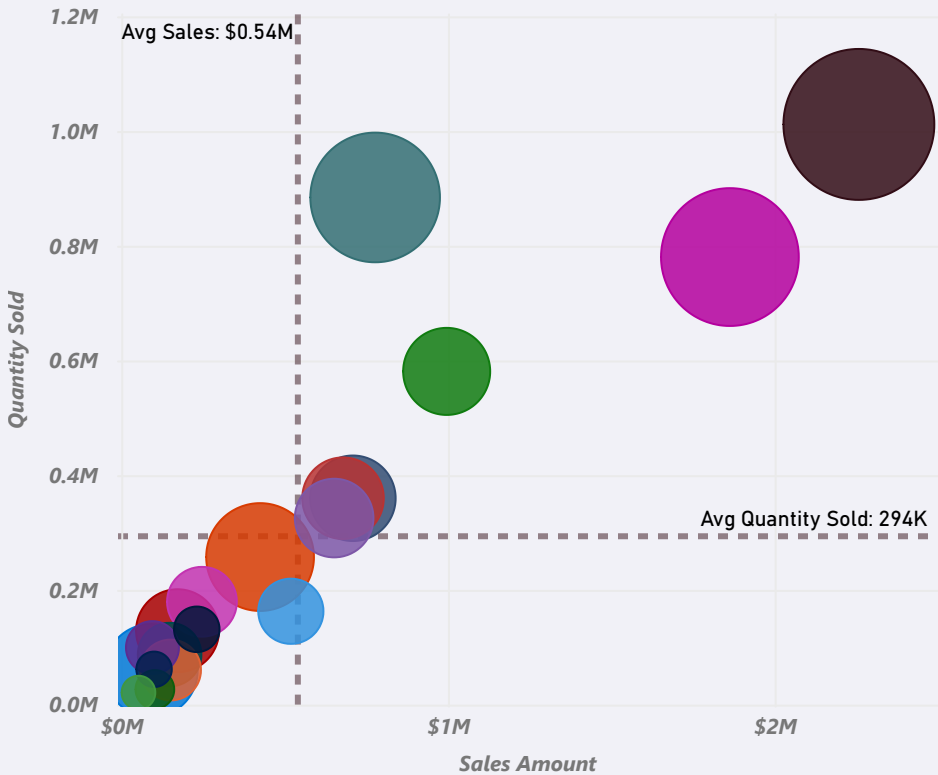
Category	Sales Amount	% of Total Sales	% of Total Customers	Quantity Sold
HOME DECOR	2,257,832	21.98%	84.26%	1,011,610
KITCHEN & TABLETOP	1,863,055	18.14%	82.49%	780,343
BAGS & ACCESSORIES	996,072	9.70%	63.49%	580,988
STATIONERY & CARDS	777,119	7.57%	75.13%	884,268
LIGHTING	709,014	6.90%	65.22%	359,768
PARTY & EVENTS	678,770	6.61%	68.59%	359,857
RIBBONS & CRAFT	651,643	6.35%	61.88%	325,286
STORAGE & ORGANISATION	519,135	5.05%	58.58%	162,760
KEYRINGS & BADGES	424,901	4.14%	64.49%	257,287
TOYS & GAMES	246,999	2.41%	52.66%	179,332
VINTAGE/RETRO	231,194	2.25%	52.67%	131,323
CANDLES & HOLDERS	172,288	1.68%	46.31%	128,823
TEXTILES & LINEN	151,002	1.47%	40.81%	60,342
GARDEN & OUTDOOR	147,952	1.44%	42.00%	87,199
UMBRELLA	102,900	1.00%	24.28%	26,506
BATH & BEAUTY	100,430	0.98%	26.80%	61,543
CHRISTMAS DECOR	95,491	0.93%	34.88%	99,414
JEWELLERY	91,597	0.89%	34.93%	59,384
LANTERN	52,709	0.51%	19.39%	20,970

RFM Retention & Key Insights

Customer Type

- ● Registered
- ● Guest

24.03%

75.97%

Repeat Customers	Repeat Customer Rate %	Churned Customers %	High-Risk Revenue Rate
2829	**49.6%**	**13.65%**	**7.5%**
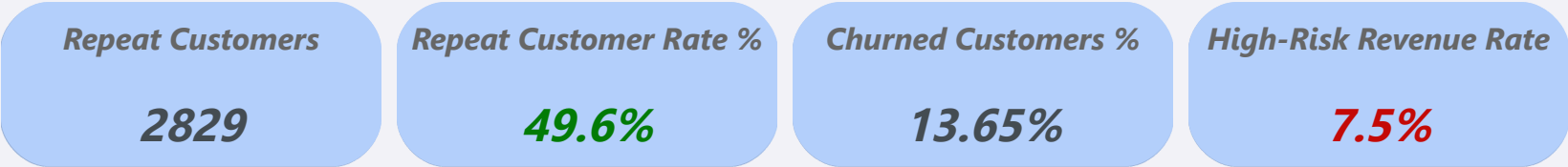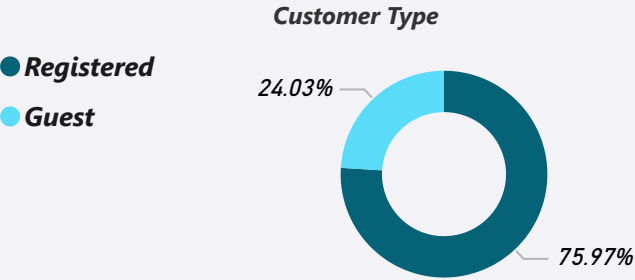
Monthly Revenue Trend by RFM Segment

Segment ● Champions ● Potential Loyalists ● Other ● Lost

$1M

$0M

Dec 2010 | Jan 2011 | Feb 2011 | Mar 2011 | Apr 2011 | May 20... | Jun 2011 | Jul 2011 | Aug 2011 | Sep 2011 | Oct 2011 | Nov 2011 | Dec 2011
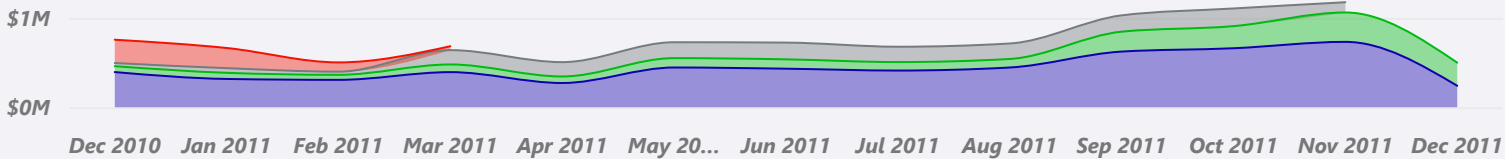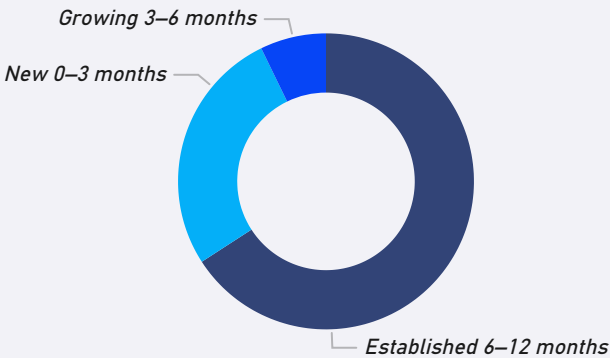
Key Insights & Recommended Actions

- Repeat customers represent **49.6% of the base** and **over-index in revenue** – keep investing in loyalty programmes and personalised offers.
- **Lost and High-Risk customers** are **13.65% of the base** and **7.5% of revenue** – treat this as **"revenue at risk"** and launch targeted win-back campaigns, tracking a "Saved Revenue from High-Risk customers" KPI.
- The **"Other"** segment is **40.5% of customers but only 16.1% of revenue**; within it, **High/Medium Potential** customers are a small group yet drive **17% of segment revenue** – clarify the value proposition and move them into a "Nurture to Loyal/Champions" journey.
- The **RFM heatmap** shows most customers in **low Frequency (F = 1–2)** – design "first-to-second purchase" and repeat-purchase journeys (welcome flows, timed discounts, product recommendations) to grow CLV.

Other Segment - Micro-Segmentation Summary

Segment	Other Subsegment	Total Customers	Sum of Monetary ▼
Other	● Other - Low Potential	2220	1,361,946
Other	● Other - High Potential	37	174,188
Other	● Other - Medium Potential	54	112,568
Total		**2311**	**1,648,701**

Sales vs Customer Cuont - 'Other' Subsegment

● Sales Amount ● Total Customers

$1.36M

$1.0M

$0.5M

$0.17M

$0.11M

$0.0M

2000

1000

0

Other - Low Potential | Other - High Potential | Other - Medium Potential

Revenue Share by Customer Tenure (0–3 vs 3–6 vs 6–12 months)

Growing 3–6 months

New 0–3 months

Established 6–12 months
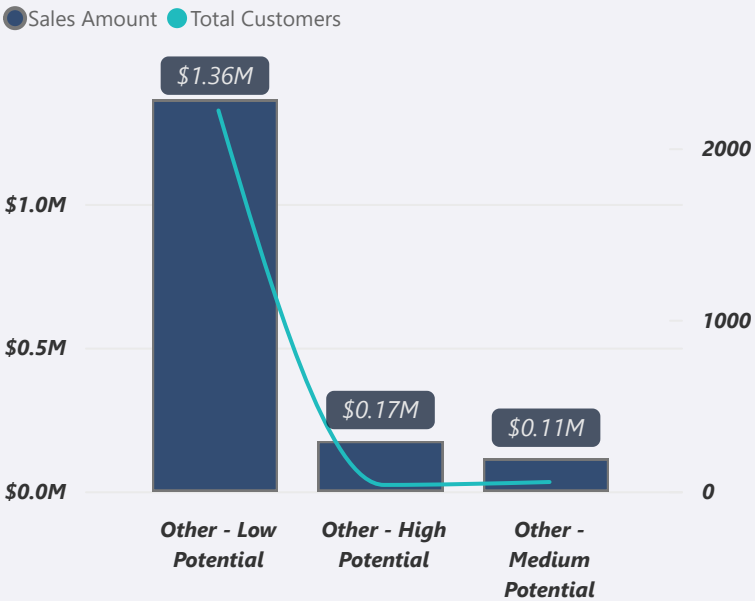
RFM Heatmap - Recency (R) vs Frequency(F)

R Score	1	2	3	4	5
1	718	45	14	3	1
2	658	112	56	6	1
3	548	160	165	27	5
4	607	251	381	126	32
5	345	264	516	317	347

Most customers are concentrated in low-frequency groups (F=1–2) with mixed Recency scores, highlighting a large base of one-time or infrequent buyers.

Online Retail (UCI) - Dashboard Documentation

This dashboard analyses one year of transactional data for a UK-based online retail store.
It focuses on sales, products, customers and countries, using RFM and portfolio analysis to understand customer value, retention and product performance.
The goal of this page is to summarize the main logic, data structure and key assumptions behind the model.

التقرير يلخص أداء متجر تجزئة إلكتروني خلال سنة واحدة مع التركيز على المنتجات والعملاء والدول باستخدام (RFM)

Reporting period: 1 Dec 2010 – 9 Dec 2011
Data source: "Online Retail" dataset – UCI Machine Learning Repository

This overview tab documents the key assumptions, data model design and business logic used across the Online Retail (UCI) dashboard.

هذه الصفحة تعرض ملخصًا لأهم الافتراضات
وهيكلة نموذج البيانات والمنطق التحليلي
المستخدم في تقرير Online Retail (UCI)

Overview   **Key Metrics**   **RFM & Segments**   **Product Categorise**

Data Model – Tables & Grain (Summary)

The data model follows a star-schema with one fact table and three main dimensions.

* Fact Sales – 1 row per invoice line (InvoiceNo + StockCode).
Keys: InvoiceNo, StockCode, CustomerID, InvoiceDate.
Main fields: Quantity, Price, Total Price, InvoiceNo, InvoiceDate, CustomerID, StockCode.

* Dim Date – 1 row per calendar date.
Main fields: Date, Year, Month (number and name), Quarter, Week, YearMonth (for sorting and display).

* Dim Customer – 1 row per unique customer (CustomerID).
Key: CustomerID.
Main fields: Country, Customer Type, Monetary, AOV, R/F/M Scores, RFM Score, Segment, Churn Risk, TenureBucket, FirstPurchaseDate, LastPurchaseDate.

* Dim Products – 1 row per product / StockCode.
Key: StockCode.
Main fields: StockCode, Description, Category (rule-based product grouping).

Together, these tables enable analysis of sales by time

Type	Note
Limitation	There is no data about marketing channels, customer acquisition cost (CAC) or demographics, so performance cannot be evaluated by campaign or customer profile.
Limitation	The dataset covers one store and roughly one year of history only; insights should not be generalized directly to other years or businesses.
Assumption	The analysis period (Dec 2010 to Dec 2011) is treated as a full operational year for RFM, Tenure and Churn calculations.
Limitation	Synthetic anonymous customers (ANON_InvoiceNo) may not correspond to real unique individuals and can bias customer-level metrics if not filtered out when appropriate.
Assumption	Rows with non-positive values in Quantity or Unit Price (<= 0) were removed from the dataset; remaining rows represent valid sales transactions only.
Limitation	RFM segments and Churn Risk are derived only from past behavior within this dataset and do not represent a full predictive churn model.
Assumption	Only completed sales invoices are included in the model. Returned / cancelled invoices (credit notes) were removed during data preparation.
Assumption	Non-product operational items such as shipping, bank charges, postage, samples, gifts to customers and similar items were excluded based on StockCode and Description rules. The analysis focuses only on sellable products.
Limitation	No cost or true profit margin data is available, so the analysis is based on revenue (Total Price) rather than actual profitability.
Assumption	Missing product descriptions were filled in Power Query by looking up the Description from other rows with the same StockCode. This assumes that each StockCode has one consistent Description across the dataset.
Assumption	Each CustomerID (including ANON_InvoiceNo) is treated as a unique customer. No attempt was made to merge multiple IDs that might belong to the same real person.

Report Owner: Ahmed Mustafa – Data Analyst
Contact: ahmed@ahmedksa.com