Khách hàng tập trung chủ yếu ở độ tuổi nào (giả tưởng thời điểm hiện tại là năm 2014) ? Vị trí địa lý ? Ngành nghề nào ? (sử dụng Sales.vPersonDemographics)

AGE:

SELECT

(2014 - YEAR(BirthDate)) AS Tuoi,

COUNT(\*) AS CustomerCount

FROM Sales.vPersonDemographics

WHERE TotalPurchaseYTD <> '0'

GROUP BY (2014 - YEAR(BirthDate))

ORDER BY CustomerCount DESC;

GEO:

OCCUPATION:

SELECT

Occupation,

COUNT(\*) AS CustomerCount

FROM Sales.vPersonDemographics

WHERE TotalPurchaseYTD <> '0'

GROUP BY Occupation

ORDER BY CustomerCount DESC;

• Tỉ lệ sales đạt target theo thời gian ? Thông tin của nhân viên sales bán nhiều nhất theo từng tháng ?

SELECT MONTH(Q.QuotaDate) 'MONTHQUOTA',

YEAR(Q.QuotaDate) 'YEARQUOTA',

COUNT(\*) AS 'DAT CHI TIEU'

FROM Sales.SalesPersonQuotaHistory AS Q

LEFT JOIN Sales.SalesPerson AS P ON Q.BusinessEntityID=P.BusinessEntityID

WHERE Q.SalesQuota >= P.SalesQuota

GROUP BY YEAR(Q.QuotaDate),MONTH(Q.QuotaDate)

ORDER BY YEAR(Q.QuotaDate),MONTH(Q.QuotaDate)

Max:

SELECT

MONTH(QuotaDate) AS 'THANG',

YEAR(QuotaDate) AS 'NAM',

SalesQuota,

b.BusinessEntityID,

c.\*

FROM Sales.SalesPersonQuotaHistory as b

LEFT JOIN Person.Person AS c ON b.BusinessEntityID=c.BusinessEntityID

WHERE SalesQuota = (

SELECT MAX(SalesQuota)

FROM Sales.SalesPersonQuotaHistory AS sqh

WHERE MONTH(sqh.QuotaDate) = MONTH(b.QuotaDate)

AND YEAR(sqh.QuotaDate) = YEAR(b.QuotaDate)

)

ORDER BY NAM,THANG

• Doanh số, số lượng đơn, số lượng khách hàng theo thời gian ? Theo từng loại sản phẩm ?

SELECT

COUNT(DISTINCT SalesOrderDetailID) AS 'SoLuongKhachHang',

SUM(LineTotal) AS 'DoanhThu',

SUM(OrderQty) AS 'SoLuongDon',

YEAR(ModifiedDate) AS Nam,

MONTH(ModifiedDate) AS Thang,

DAY(ModifiedDate) AS Ngay,

ProductID

FROM Sales.SalesOrderDetail

GROUP BY YEAR(ModifiedDate), MONTH(ModifiedDate), DAY(ModifiedDate), ProductID

ORDER BY YEAR(ModifiedDate) ASC, MONTH(ModifiedDate) ASC, DAY(ModifiedDate) ASC

• Lí do khách mua hàng chủ yếu ?

SELECT

COUNT(SalesOrderID) AS 'SoLuongKhachHang',

SL.SalesReasonID,

RS.Name

FROM Sales.SalesOrderHeaderSalesReason AS SL

LEFT JOIN Sales.SalesReason AS RS ON SL.SalesReasonID = RS.SalesReasonID

GROUP BY SL.SalesReasonID,RS.Name

ORDER BY COUNT(SalesOrderID) DESC

• Tỉ lệ đơn muộn theo thời gian ? Doanh số và số lượng khách hàng trên từng chương trình khuyến mãi ?

LATE:

SELECT

COUNT(SalesOrderID) 'SoDonMuon'

FROM Sales.SalesOrderHeader

WHERE ShipDate > DueDate

SELECT

COUNT(DISTINCT H.CustomerID) 'SokhachHang',

SUM(H.TotalDue) 'DoanhSo',

D.SpecialOfferID,

S.Description

FROM Sales.SalesOrderDetail AS D

LEFT JOIN Sales.SalesOrderHeader AS H ON H.SalesOrderID=D.SalesOrderID

LEFT JOIN Sales.SpecialOffer AS S ON S.SpecialOfferID=D.SpecialOfferID

GROUP BY D.SpecialOfferID, S.Description

ORDER BY SokhachHang DESC

Phân tích mô tả tình trạng phòng ban, module

Chọn một module và tiến hành query vào trong cơ sở dữ liệu để tiến hành trả lời các câu hỏi sau:

- Tóm tắt ngắn gọn thực trạng hoạt động của module đó trong công ty ? - Module đó có dấu hiệu đi lên hay đi xuống ? Điểm tốt và điểm xấu ? - So sánh tình trạng của module đó qua các thời kì ?

Qua các thời kì:

SALES( Doanh số, lợi nhuận, tổng khách hàng): Đoạn này em code lệnh lỗi và cũng chưa biết fix nên chưa phân tích được insight ạ.

SELECT

YEAR(OrderDate) AS Year,

SUM(DT.LineTotal) AS TotalSales,

SUM(DT.LineTotal) - SUM(HD.TotalDue) AS TotalProfit,

COUNT(DISTINCT CustomerID) AS TotalCustomers

FROM Sales.SalesOrderDetail AS DT

LEFT JOIN Sales.SalesOrderHeader AS HD ON HD.SalesOrderID=DT.SalesOrderDetailID WHERE YEAR(OrderDate) IS NOT NULL

GROUP BY YEAR(OrderDate)

ORDER BY YEAR(OrderDate)

MARKETING: giảm nhẹ ở price, Television Advertisement, Quality và Other(xấu), giảm mạnh ở Manufacturer(xấu), Review và On Promotion đều tăng mạnh ở 2013(tốt) rồi giảm sâu vào 2014(xấu)

SELECT

COUNT(SalesOrderID) AS 'SoLuongKhachHang',

SL.SalesReasonID,

RS.Name,

RS.ReasonType,

YEAR(SL.ModifiedDate) AS 'YEAR'

FROM Sales.SalesOrderHeaderSalesReason AS SL

LEFT JOIN Sales.SalesReason AS RS ON SL.SalesReasonID = RS.SalesReasonID

GROUP BY SL.SalesReasonID,RS.Name,RS.ReasonType,YEAR(SL.ModifiedDate)

ORDER BY SL.SalesReasonID,YEAR(SL.ModifiedDate)

EMPLOYEE: tăng dần từ 6 đến 14 nhân viên đạt SalesQuota (tốt)

SELECT MONTH(Q.QuotaDate) 'MONTHQUOTA',

YEAR(Q.QuotaDate) 'YEARQUOTA',

COUNT(\*) AS 'DAT CHI TIEU'

FROM Sales.SalesPersonQuotaHistory AS Q

LEFT JOIN Sales.SalesPerson AS P ON Q.BusinessEntityID=P.BusinessEntityID

WHERE Q.SalesQuota >= P.SalesQuota

GROUP BY YEAR(Q.QuotaDate),MONTH(Q.QuotaDate)

ORDER BY YEAR(Q.QuotaDate),MONTH(Q.QuotaDate)

--XĐ: Average Sales Cycle Length của mỗi nhân viên. Mục đích: nhằm từ tiêu chuẩn riêng của doanh nghiệp đánh giá xem ai chốt đơn hàng nhanh chóng và ai cần cải thiện

SELECT

AVG(DATEDIFF(DAYOFYEAR, OrderDate, ShipDate)) AS AverageDaysToShip,

SalesPersonID

FROM Sales.SalesOrderHeader

GROUP BY SalesPersonID

-- XĐ: CAC và CLV. Mục đích: So sánh giá trị trọn đời của một khách hàng với chi phí thu hút của một khách hàng để điều chỉnh chi phí cho phù hợp hoặc thúc đẩy giá trị trên một khách hàng

WITH CAC AS(

SELECT

SUM(TotalDue) 'TotalAcquisitionCost',

COUNT(DISTINCT CustomerID) 'NewCustomers',

YEAR(OrderDate) 'YearOrder'

FROM Sales.SalesOrderHeader

GROUP BY YEAR(OrderDate)

)

-- Tính CAC

SELECT

(TotalAcquisitionCost / NewCustomers) 'CACVALUE',

YearOrder

FROM CAC

ORDER BY YearOrder

-- Tính CLV

WITH AverageOrderValueTable AS (

SELECT

AVG(DT.LineTotal) AS AverageOrderValue,

YEAR(OrderDate) AS 'Year'

FROM Sales.SalesOrderDetail AS DT

LEFT JOIN Sales.SalesOrderHeader AS HD ON HD.SalesOrderID=DT.SalesOrderDetailID

WHERE YEAR(OrderDate) IS NOT NULL

GROUP BY YEAR(OrderDate)

),

AveragePurchaseFrequencyTable AS (

SELECT

COUNT(\*) / COUNT(DISTINCT CustomerID) AS AveragePurchaseFrequency,

YEAR(OrderDate) AS 'Year'

FROM Sales.SalesOrderHeader

GROUP BY YEAR(OrderDate)

),

CustomerLifetimeTable AS (

SELECT

DATEDIFF(DAY, MIN(OrderDate), MAX(OrderDate)) AS CustomerLifetime,

CustomerID,

YEAR(OrderDate) AS 'Year'

FROM Sales.SalesOrderHeader

GROUP BY CustomerID, YEAR(OrderDate)

),

AverageCustomerLifetimeTable AS (

SELECT

AVG(CustomerLifetime) AS AverageCustomerLifetime,

Year

FROM CustomerLifetimeTable

GROUP BY Year

)

SELECT

AverageOrderValue \* AveragePurchaseFrequency \* AverageCustomerLifetime AS CLV,

T1.Year

FROM AverageOrderValueTable AS T1

LEFT JOIN AveragePurchaseFrequencyTable AS T2 ON T1.Year = T2.Year

LEFT JOIN AverageCustomerLifetimeTable AS T3 ON T3.Year = T2.Year

ORDER BY T1.Year