SQL Project Report - G2

Aileen Taing, Anit Roslin Paul, Gray Underhill, Jessica Penners,
Madina Sainazarova, Chin-Wei Chang, Yogen Mudgal

Entertainment Data Dictionary

Agents Table

Field Name	Data Type	Description	Constraints
AgentID	Integer	Unique identifier for agent	Primary Key
AgtFirstName	Text	Agent's first name	-
AgtLastName	Text	Agent's last name	-
AgtStreetAddress	Text	Agent's street address	-
AgtCity	Text	Agent's city	-
AgtState	Text	Agent's state	-
AgtZipCode	Text	Agent's ZIP code	-
AgtPhoneNumber	Text	Agent's phone number	-
DateHired	Date	Date agent was hired	-
Salary	Float	Agent's salary	-
CommissionRate	Float	Agent's commission rate	-

Customers Table

Field Name	Data Type	Description	Constraints
CustomerID	Integer	Unique customer ID	Primary Key
CustFirstName	Text	Customer's first name	-
CustLastName	Text	Customer's last name	-
CustStreetAddress	Text	Customer's street address	-
CustCity	Text	Customer's city	-
CustState	Text	Customer's state	-

CustZipCode	Text	Customer's ZIP code	-
CustPhoneNumber	Text	Customer's phone number	-

Entertainers Table

Field Name	Data Type	Description	Constraints
EntertainerID	Integer	Unique entertainer ID	Primary Key
EntStageName	Text	Entertainer's stage name	-
EntSSN	Text	Entertainer's SSN	-
EntStreetAddress	Text	Street address	-
EntCity	Text	City	-
EntState	Text	State	-
EntZipCode	Text	ZIP code	-
EntPhoneNumber	Text	Phone number	-
EntWebPage	Text	Web page	-
EntEMailAddress	Text	Email address	-
DateEntered	Date	Date entered into the system	-

Engagements Table

Field Name	Data Type	Description	Constraints
EngagementNumber	Integer	Unique engagement ID	Primary Key
StartDate	Date	Engagement start date	-
EndDate	Date	Engagement end date	-
StartTime	Time	Start time	-
StopTime	Time	Stop time	-
ContractPrice	Float	Price of the engagement contract	-
CustomerID	Integer	Linked customer	Foreign Key

AgentID	Integer	Linked agent	Foreign Key
EntertainerID	Integer	Linked entertainer	Foreign Key

Entertainer Styles Table

Field Name	Data Type	Description	Constraints
EntertainerID	Integer	Linked entertainer	Foreign Key
StyleID	Integer	Linked musical style	Foreign Key
StyleStrength	Integer	Proficiency in musical style	-

Musical Styles Table

Field Name	Data Type	Description	Constraints
StyleID	Integer	Musical style ID	Primary Key
StyleName	Text	Name of the music style	-

Musical Preferences Table

Field Name	Data Type	Description	Constraints
CustomerID	Integer	Linked customer	Foreign Key
StyleID	Integer	Preferred musical style	Foreign Key
PreferenceSeq	Integer	Order of preference	-

Members Table

Field Name	Data Type	Description	Constraints
MemberID	Integer	Unique member ID	Primary Key
MbrFirstName	Text	Member first name	-
MbrLastName	Text	Member last name	-
MbrPhoneNumber	Text	Phone number	-
Gender	Text	Gender	-

Entertainer Members Table

Field Name	Data Type	Description	Constraints
EntertainerID	Integer	Linked entertainer	Foreign Key
MemberID	Integer	Linked member	Foreign Key
Status	Text	Member status	-

Data Quality Notes

A. **Issues to be fixed:**
   a. **Adjust salary outlier at 50**
      i. Remove from database
   b. **Adjust engagements start dates that start after the end date**

B. **Other issues noted and/or investigated:**

```
-- MANUAL FLAGS TO INVESTIGATE
-- Agents: Possible address format issue (hyphen in address: 30301 - 166th Ave. N.E.)
SELECT * FROM Agents WHERE AgtFirstName = 'Karen';

-- Engagements: Missing engagement numbers (e.g., 1, 130)
SELECT EngagementNumber FROM Engagements ORDER BY EngagementNumber;

-- Engagements: StartDate after EndDate (e.g., 23, 90, 118)
SELECT * FROM Engagements WHERE EndDate <= StartDate;

-- Customers: Possible address format issue for Doris (CustID = 10001, 4726 - 11th Ave.N.E).
SELECT * FROM Customers WHERE CustID = 10001;

-- DUPLICATE CHECKS
-- Duplicate Customers by (First, Last, Phone)
SELECT CustFirstName, CustLastName, CustPhoneNumber, COUNT(*) AS Count
FROM Customers
GROUP BY CustFirstName, CustLastName, CustPhoneNumber
HAVING COUNT(*) > 1;

-- Duplicate Engagements by (CustomerID, StartDate, EntertainerID)
SELECT CustomerID, StartDate, EntertainerID, COUNT(*) AS Count
FROM Engagements
GROUP BY CustomerID, StartDate, EntertainerID
HAVING COUNT(*) > 1;
```

```
-- DATA TYPE COMPATIBILITY
-- Ensure ztblDays.DateField and Engagements.StartDate are both of type DATE
SELECT DISTINCT pg_typeof(DateField) AS DateFieldType FROM ztblDays;
SELECT DISTINCT pg_typeof(StartDate) AS StartDateType FROM Engagements;

-- INVALID FORMATS
-- ZIP Codes (non-5-digit)
SELECT * FROM Customers WHERE CustZipCode !~ '^\d{5}$';

-- Phone Numbers (not ###-####)
SELECT * FROM Customers WHERE CustPhoneNumber !~ '^\d{3}-\d{4}$';

-- Invalid Gender Entries (not M/F)
SELECT * FROM Members WHERE Gender IS NOT NULL AND Gender NOT IN ('M',
'F');

-- MISSING VALUES
-- Agents with missing names
SELECT COUNT(*) AS NullAgentNames FROM Agents
WHERE AgtFirstName IS NULL OR AgtLastName IS NULL;

-- Customers with missing names
SELECT COUNT(*) AS NullCustomerNames FROM Customers
WHERE CustFirstName IS NULL OR CustLastName IS NULL;

-- Engagements missing foreign keys
SELECT COUNT(*) AS NullEngagementLinks FROM Engagements
WHERE CustomerID IS NULL OR EntertainerID IS NULL;

-- Entertainers with missing email (6) or webpage (5)
SELECT COUNT(*) AS NullWebpages FROM Entertainers WHERE EntWebpage IS
NULL;
SELECT COUNT(*) AS NullEmails FROM Entertainers WHERE EntEmailAddress IS
NULL;

-- Members with missing gender (1)
SELECT COUNT(*) AS NullGender FROM Members WHERE Gender IS NULL;

-- Agents with null phone (9)
SELECT COUNT(*) AS NullPhones FROM Agents WHERE AgtPhoneNumber IS NULL;

-- Customers with null phone (15)
```

```
SELECT COUNT(*) AS NullPhones FROM Customers WHERE CustPhoneNumber IS
NULL;

-- Entertainers with no contact info
SELECT * FROM Entertainers
WHERE EntPhoneNumber IS NULL AND EntEmailAddress IS NULL;

-- OUTLIERS
-- Outlier Salaries using IQR (1 at 50)
WITH SalaryStats AS (
 SELECT
   PERCENTILE_CONT(0.25) WITHIN GROUP (ORDER BY Salary) AS Q1,
   PERCENTILE_CONT(0.75) WITHIN GROUP (ORDER BY Salary) AS Q3
 FROM Agents
),
OutlierAgents AS (
 SELECT A.*
 FROM Agents A
 JOIN SalaryStats S ON TRUE
 WHERE A.Salary < S.Q1 - 1.5 * (S.Q3 - S.Q1)
    OR A.Salary > S.Q3 + 1.5 * (S.Q3 - S.Q1)
)
SELECT * FROM OutlierAgents;

-- Strange engagement dates
SELECT * FROM Engagements
WHERE StartDate > CURRENT_DATE + INTERVAL '1 year'
   OR EndDate < '2000-01-01';
```

Exploratory Data Analysis

1. Understanding the pricing range & Total Number of Engagements
    a. Minimum price of all engagements: $110
    b. Maximum price of all engagements: $14,105
    c. Average price: $1,266
    d. Total Engagements = 111
    e.

minprice	maxprice	avgprice	totalengagements
110	14,105	1,266.2162162162	111

```
SELECT
    MIN(ContractPrice) AS MinPrice,
    MAX(ContractPrice) AS MaxPrice,
    AVG(ContractPrice) AS AvgPrice,
    COUNT(*) AS TotalEngagements
FROM Engagements;
```

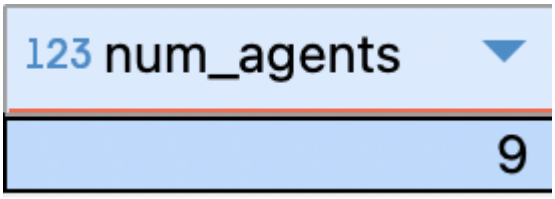
2. Number of bookings per customer
    a. Zachary booked 13 engagements (most bookings)
    b.

	customername	numengagements
1	Zachary Ehrlich	13
2	Dean McCrae	11
3	Deb Waldal	10
4	Mark Rosales	10
5	Matt Berg	9
6	Doris Hartwig	8
7	Elizabeth Hallmark	8
8	Sarah Thompson	8
9	Peter Brehm	7
10	Kerry Patterson	7
11	Liz Keyser	7

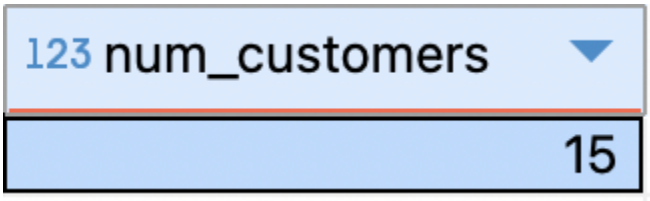
```
SELECT
    c.CustFirstName || ' ' || c.CustLastName AS CustomerName,
    COUNT(e.EngagementNumber) AS NumEngagements
FROM Customers c
JOIN Engagements e ON c.CustomerID = e.CustomerID
GROUP BY CustomerName
ORDER BY NumEngagements DESC
```

3. Number of Agents

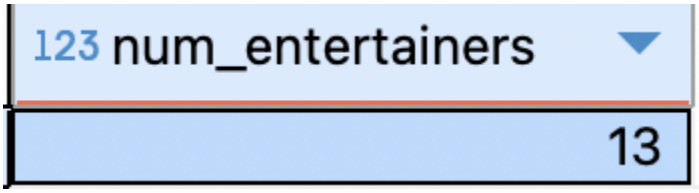
a. 9

b. 

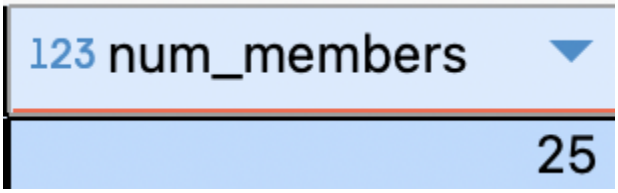
select count (*) as num_agents from agents a

4. Number of Customers
   a. 15
   b. 

   select count (*) as num_customers from customers c

5. Number of Entertainers
   a. 13
   b. 

   select count (*) as num_entertainers from entertainers e

6. Number of Entertainer Members
   a. 25 members
   b. The members table identifies the names and additional details of the individuals who are a solo, group, or duo act.
   c. 

   select count(*) as num_members from members m

7. Number of members per entertainer

123 entertainerid	A-Z entstagename	123 num_members
1,003	JV & the Deep Six	6
1,013	Caroline Coie Cuartet	4
1,005	Jazz Persuasion	3
1,010	Saturday Revue	4
1,006	Modern Dance	4
1,002	Topazz	2
1,004	Jim Glynn	1
1,001	Carol Peacock Trio	3
1,007	Coldwater Cattle Company	5
1,012	Susan McLain	1
1,009	Katherine Ehrlich	1

a.

```
select em.entertainerid, e.entstagename, count(em.memberid) as num_members
from entertainer_members em
join entertainers e on em.entertainerid = e.entertainerid
group by em.entertainerid, e.entstagename
```

8. Number of musical styles
   a. 25 different musical styles
   Select count (*) from musical_styles ms

9. Number of musical styles per entertainer

123 entertainerid	123 numstyles
1,001	3
1,009	3
1,010	3
1,011	3
1,005	3
1,006	3
1,002	3
1,013	2
1,003	2
1,007	2

a.

```
SELECT
    EntertainerID,
    COUNT(DISTINCT StyleID) AS NumStyles
FROM Entertainer_Styles
GROUP BY EntertainerID
ORDER BY NumStyles DESC
LIMIT 10;
```

Relationships across tables, identifying how different parts of the business interact:

1. Understanding the business process (Musical Performance Booking Agency)

   Insight: shows the chain of business interaction for each event / booking, which customer booked, the agent that managed, which entertainers performed and the event details.

```
SELECT
    eng.EngagementNumber,
    c.CustFirstName || ' ' || c.CustLastName AS Customer,
    a.AgtFirstName || ' ' || a.AgtLastName AS Agent,
    ent.EntStageName AS Entertainer,
    eng.StartDate,
    eng.ContractPrice
FROM Engagements eng
JOIN Customers c ON eng.CustomerID = c.CustomerID
JOIN Agents a ON eng.AgentID = a.AgentID
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
ORDER BY eng.StartDate DESC;
```

	123 engagementnumber	A-Z customer	A-Z agent	A-Z entertainer	startdate	123 contractprice
1	131	Mark Rosales	William Thompson	JV & the Deep Six	2018-03-04	1,850
2	128	Peter Brehm	Karen Smith	Julia Schnebly	2018-02-27	320
3	123	Estella Pundt	William Thompson	Carol Peacock Trio	2018-02-26	770
4	126	Sarah Thompson	John Kennedy	Modern Dance	2018-02-25	1,010
5	127	Zachary Ehrlich	Karen Smith	Jazz Persuasion	2018-02-25	500
6	129	Dean McCrae	Marianne Wier	Caroline Coie Cuartet	2018-02-25	2,450
7	122	Mark Rosales	Marianne Wier	Saturday Revue	2018-02-25	1,010
8	124	Matt Berg	William Thompson	Country Feeling	2018-02-24	1,850
9	125	Doris Hartwig	Carol Viescas	JV & the Deep Six	2018-02-24	1,130
10	112	Carol Viescas	Caleb Viescas	Julia Schnebly	2018-02-20	410
11	119	Kerry Patterson	Scott Bishop	Jim Glynn	2018-02-20	500
12	115	Liz Keyser	Marianne Wier	Caroline Coie Cuartet	2018-02-20	1,490

2. Understanding customer preferences to book entertainers

   Insight: demonstrates how well the agent is matching customer's musical preferences with the entertainer's

```
SELECT
    c.CustFirstName || ' ' || c.CustLastName AS Customer,
    ms.StyleName AS PreferredStyle,
    ent.EntStageName AS BookedEntertainer,
    ms.stylename as entertainerstyle
FROM Engagements eng
JOIN Customers c ON eng.CustomerID = c.CustomerID
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
```

```
JOIN Entertainer_Styles es ON ent.EntertainerID = es.EntertainerID
JOIN Musical_Styles ms ON es.StyleID = ms.StyleID
JOIN Musical_Preferences mp ON c.CustomerID = mp.CustomerID AND
mp.StyleID = ms.StyleID
ORDER BY Customer, PreferredStyle;
```

	customer	preferredstyle	bookedentertainer	entertainerstyle
1	Carol Viescas	Show Tunes	Julia Schnebly	Show Tunes
2	Carol Viescas	Show Tunes	Julia Schnebly	Show Tunes
3	Dean McCrae	Jazz	Caroline Coie Cuartet	Jazz
4	Dean McCrae	Jazz	Jazz Persuasion	Jazz
5	Dean McCrae	Jazz	Jazz Persuasion	Jazz
6	Dean McCrae	Jazz	Caroline Coie Cuartet	Jazz
7	Dean McCrae	Standards	Carol Peacock Trio	Standards
8	Deb Waldal	60's Music	JV & the Deep Six	60's Music
9	Deb Waldal	60's Music	Country Feeling	60's Music
10	Deb Waldal	60's Music	Country Feeling	60's Music
11	Deb Waldal	Classic Rock & Roll	JV & the Deep Six	Classic Rock & Roll
12	Doris Hartwig	Contemporary	Carol Peacock Trio	Contemporary

3. Which agents booked which styles the most?

Insight: which agents are most active in booking certain musical styles; shows a trend / specialization in agent - entertainer relationships

```
SELECT
   a.AgtFirstName || ' ' || a.AgtLastName AS Agent,
   ms.StyleName AS BookedStyle,
   COUNT(*) AS NumBookings
FROM Engagements eng
JOIN Agents a ON eng.AgentID = a.AgentID
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
JOIN Entertainer_Styles es ON ent.EntertainerID = es.EntertainerID
JOIN Musical_Styles ms ON es.StyleID = ms.StyleID
GROUP BY a.AgtFirstName, a.AgtLastName, ms.StyleName
ORDER BY Agent, NumBookings DESC;
```

	agent	bookedstyle	numbookings
1	Caleb Viescas	60's Music	4
2	Caleb Viescas	Country	4
3	Caleb Viescas	Classical	2
4	Caleb Viescas	Chamber Music	1
5	Caleb Viescas	Jazz	1
6	Caleb Viescas	Classic Rock & Roll	1
7	Caleb Viescas	Show Tunes	1
8	Caleb Viescas	Country Rock	1
9	Caleb Viescas	Contemporary	1
10	Caleb Viescas	Folk	1
11	Carol Viescas	Country	5
12	Carol Viescas	60's Music	5

4. Agent - Entertainer Relationship

Insight: Understand how agents work with entertainers for bookings

```
SELECT
   a.AgtFirstName || ' ' || a.AgtLastName AS Agent,
   ent.EntStageName AS Entertainer,
   ms.StyleName AS BookedStyle,
   COUNT(*) AS NumBookings
FROM Engagements eng
JOIN Agents a ON eng.AgentID = a.AgentID
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
JOIN Entertainer_Styles es ON ent.EntertainerID = es.EntertainerID
JOIN Musical_Styles ms ON es.StyleID = ms.StyleID
GROUP BY a.AgtFirstName, a.AgtLastName, ent.EntStageName, ms.StyleName
ORDER BY numbookings desc;
```

SELECT a.AgtFirstName || ' ' || a.AgtLastName AS A | Enter a SQL expression to filter results (use

Grid | Text | Record

	agent	entertainer	bookedstyle	numbookings
1	Maria Patterson	Carol Peacock Trio	Contemporary	4
2	Maria Patterson	Carol Peacock Trio	Standards	4
3	Marianne Wier	Carol Peacock Trio	Standards	4
4	Marianne Wier	Carol Peacock Trio	Contemporary	4
5	Maria Patterson	Carol Peacock Trio	Show Tunes	4
6	Marianne Wier	Carol Peacock Trio	Show Tunes	4
7	Maria Patterson	Saturday Revue	Top 40 Hits	3
8	Maria Patterson	Jim Glynn	Folk	3
9	Karen Smith	Julia Schnebly	Classical	3
10	William Thomps	JV & the Deep Six	Classic Rock & Roll	3
11	Carol Viescas	Modern Dance	Salsa	3
12	John Kennedy	Country Feeling	60's Music	3

```
SELECT
   a.AgtFirstName || ' ' || a.AgtLastName AS Agent,
```

```
    ent.EntStageName AS Entertainer,
    COUNT(*) AS NumEngagementsTogether,
    SUM(eng.ContractPrice) AS TotalRevenueTogether
FROM Engagements eng
JOIN Agents a ON eng.AgentID = a.AgentID
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
GROUP BY a.AgtFirstName, a.AgtLastName, ent.EntStageName
HAVING COUNT(*) > 1
ORDER BY TotalRevenueTogether DESC;
```

	A-Z agent	A-Z entertainer	123 numengagementstogether	123 totalrevenuetogether
1	John Kennedy	Country Feeling	3	16,305
2	Marianne Wier	Caroline Coie Cuartet	3	5,490
3	Carol Viescas	Country Feeling	3	5,250
4	Carol Viescas	Modern Dance	3	5,070
5	William Thompson	JV & the Deep Six	3	5,010
6	Carol Viescas	JV & the Deep Six	2	4,780
7	William Thompson	Country Feeling	2	4,600
8	Scott Bishop	Saturday Revue	2	4,300
9	Marianne Wier	Carol Peacock Trio	4	4,070
10	Maria Patterson	Carol Peacock Trio	4	3,890
11	Caleb Viescas	Country Feeling	3	3,750
12	Karen Smith	Country Feeling	3	3,525

5. Each customer's most frequently booked entertainer

   Insight: Which entertainer each customer books often and checks to see if there's customer loyalty for specific artists

```
SELECT
    Customer,
    Entertainer,
    NumBookings
FROM (
    SELECT
        c.CustFirstName || ' ' || c.CustLastName AS Customer,
        ent.EntStageName AS Entertainer,
        COUNT(*) AS NumBookings,
        RANK() OVER (PARTITION BY c.CustomerID ORDER BY COUNT(*)
DESC) AS rnk
    FROM Engagements eng
    JOIN Customers c ON eng.CustomerID = c.CustomerID
    JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
    GROUP BY c.CustomerID, c.CustFirstName, c.CustLastName,
ent.EntStageName
) ranked
WHERE rnk = 1
ORDER BY Customer;
```

A-Z customer	A-Z entertainer	123 numbookings
Carol Viescas	Julia Schnebly	2
Carol Viescas	JV & the Deep Six	2
Dean McCrae	Caroline Coie Cuartet	2
Dean McCrae	Jazz Persuasion	2
Dean McCrae	Topazz	2
Dean McCrae	Susan McLain	2
Deb Waldal	Caroline Coie Cuartet	2
Deb Waldal	Coldwater Cattle Company	2
Deb Waldal	Country Feeling	2
Deb Waldal	Saturday Revue	2
Doris Hartwig	Carol Peacock Trio	2
Doris Hartwig	Topazz	2

6. Running total of revenue for each entertainer

Insight: track revenue growth and see which customers and agents are contributing an entertainer's success

```
SELECT
    eng.EngagementNumber,
    eng.StartDate,
    ent.EntStageName AS Entertainer,
    a.AgtFirstName || ' ' || a.AgtLastName AS Agent,
    c.CustFirstName || ' ' || c.CustLastName AS Customer,
    eng.ContractPrice,
    SUM(eng.ContractPrice) OVER (
        PARTITION BY ent.EntertainerID
        ORDER BY eng.StartDate, eng.EngagementNumber
        ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW
    ) AS RunningTotalRevenue
FROM Engagements eng
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
JOIN Agents a ON eng.AgentID = a.AgentID
JOIN Customers c ON eng.CustomerID = c.CustomerID
ORDER BY ent.EntStageName, eng.StartDate, eng.EngagementNumber;
```

	engagementnumber	startdate	entertainer	agent	customer	contractprice	runningtotalrevenue
1	12	2017-09-19	Carol Peacock Trio	Maria Patterson	Mark Rosales	1,670	1,670
2	24	2017-10-02	Carol Peacock Trio	Karen Smith	Doris Hartwig	1,940	3,610
3	35	2017-10-15	Carol Peacock Trio	Maria Patterson	Elizabeth Hallmark	410	4,020
4	43	2017-10-22	Carol Peacock Trio	Maria Patterson	Doris Hartwig	140	4,160
5	49	2017-11-14	Carol Peacock Trio	Marianne Wier	Mark Rosales	680	4,840
6	70	2017-12-24	Carol Peacock Trio	John Kennedy	Zachary Ehrlich	410	5,250
7	73	2017-12-30	Carol Peacock Trio	Marianne Wier	Mark Rosales	1,400	6,650
8	90	2018-01-09	Carol Peacock Trio	Marianne Wier	Matt Berg	320	6,970
9	101	2018-01-23	Carol Peacock Trio	Marianne Wier	Dean McCrae	1,670	8,640
10	110	2018-02-12	Carol Peacock Trio	Maria Patterson	Matt Berg	1,670	10,310
11	123	2018-02-26	Carol Peacock Trio	William Thompson	Estella Pundt	770	11,080
12	15	2017-09-25	Caroline Coie Quartet	William Thompson	Liz Keyser	770	770

7. Customers who preferences are not being met

Insight: identify gaps in talent pool, target recruitment or training to better meet customer demand

```
SELECT
    c.CustFirstName || ' ' || c.CustLastName AS Customer,
    ms_pref.StyleName AS Customerpreference,
    eng.EngagementNumber,
    ent.EntStageName AS BookedEntertainer,
    ms_ent.StyleName AS BookedStyle,
    a.AgtFirstName || ' ' || a.AgtLastName AS Agent
FROM Engagements eng
JOIN Customers c ON eng.CustomerID = c.CustomerID
JOIN Agents a ON eng.AgentID = a.AgentID
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
JOIN Entertainer_Styles es_ent ON ent.EntertainerID = es_ent.EntertainerID
JOIN Musical_Styles ms_ent ON es_ent.StyleID = ms_ent.StyleID
JOIN Musical_Preferences mp ON c.CustomerID = mp.CustomerID
JOIN Musical_Styles ms_pref ON mp.StyleID = ms_pref.StyleID
WHERE es_ent.StyleID <> mp.StyleID
ORDER BY Customer, eng.EngagementNumber;
```

SELECT c.CustFirstName || ' ' || c.CustLastName AS Enter a SQL expression to filter results (use Ctrl+Space)

Grid Text Record

	customer	customerpreference	engagementnumber	bookedentertainer	bookedstyle	agent
1	Carol Viescas	Show Tunes	27	JV & the Deep Six	60's Music	Caleb Viescas
2	Carol Viescas	Standards	27	JV & the Deep Six	60's Music	Caleb Viescas
3	Carol Viescas	Standards	27	JV & the Deep Six	Classic Rock & Roll	Caleb Viescas
4	Carol Viescas	40's Ballroom Music	27	JV & the Deep Six	Classic Rock & Roll	Caleb Viescas
5	Carol Viescas	40's Ballroom Music	27	JV & the Deep Six	60's Music	Caleb Viescas
6	Carol Viescas	Show Tunes	27	JV & the Deep Six	Classic Rock & Roll	Caleb Viescas
7	Carol Viescas	40's Ballroom Music	45	Susan McLain	Classical	William Thompson
8	Carol Viescas	Standards	45	Susan McLain	Classical	William Thompson
9	Carol Viescas	Standards	45	Susan McLain	Folk	William Thompson
10	Carol Viescas	Show Tunes	45	Susan McLain	Classical	William Thompson
11	Carol Viescas	Show Tunes	45	Susan McLain	Folk	William Thompson
12	Carol Viescas	40's Ballroom Music	45	Susan McLain	Folk	William Thompson

8. Customer's loyalty to entertainers

Insight: See which customers have booked the same entertainer multiple times and see if there's customer loyalty to specific entertainers

```
SELECT
    c.CustFirstName || ' ' || c.CustLastName AS Customer,
    ent.EntStageName AS Entertainer,
    COUNT(*) AS RepeatBookings,
    SUM(eng.ContractPrice) AS TotalSpent
FROM Engagements eng
JOIN Customers c ON eng.CustomerID = c.CustomerID
JOIN Entertainers ent ON eng.EntertainerID = ent.EntertainerID
GROUP BY c.CustFirstName, c.CustLastName, ent.EntStageName
HAVING COUNT(*) > 1
ORDER BY RepeatBookings DESC, TotalSpent DESC;
```

	A-Z customer	A-Z entertainer	123 repeatbookings	123 totalspent
1	Matt Berg	Country Feeling	3	6,450
2	Mark Rosales	Carol Peacock Trio	3	3,750
3	Liz Keyser	Caroline Coie Cuartet	3	3,510
4	Mark Rosales	Saturday Revue	3	3,210
5	Kerry Patterson	Jim Glynn	3	795
6	Elizabeth Hallmark	Country Feeling	2	15,055
7	Elizabeth Hallmark	JV & the Deep Six	2	5,140
8	Deb Waldal	Caroline Coie Cuartet	2	4,000
9	Carol Viescas	JV & the Deep Six	2	3,880
10	Dean McCrae	Caroline Coie Cuartet	2	3,820
11	Zachary Ehrlich	Coldwater Cattle Company	2	3,100
12	Deb Waldal	Saturday Revue	2	2,980

9. Agent Commissions for booked engagements

Insight: Agents receive a portion of the money in each contract. Does our organization represent the entertainers, the agents, or both? Depending on the answer, the fee to the agent is either part of the payroll or an external expense.

```
select engagementnumber as engagement, concat(agtfirstname, ' ', agtlastname) as
agent_name,
        contractprice, commissionrate, round(contractprice * commissionrate) as
agent_paid
from engagements e
join agents a
on e.agentid = a.agentid
order by agent_paid desc
```

	engagement	agent_name	contractprice	commissionrate	agent_paid
1	99	John Kennedy	14,105	0.06	846
2	28	Karen Smith	3,800	0.055	209
3	10	Carol Viescas	3,650	0.05	183
4	37	Carol Viescas	2,675	0.05	134
5	66	Marianne Wier	2,930	0.045	132
6	121	Carol Viescas	2,570	0.05	129
7	98	Scott Bishop	2,930	0.04	117
8	92	John Kennedy	1,925	0.06	115
9	129	Marianne Wier	2,450	0.045	110

10. How much do artists end up getting paid?

    Insight: Because of the agent commission rate, the amount that entertainers are actually paid is less than their up-front contract price.

```
select ent.entstagename as stage_name,
        engagementnumber as engagement,
        contractprice,
        1 - a.commissionrate as artist_pay_rate,
        round(contractprice * (1 - a.commissionrate)) as artist_paid
from entertainers ent
join engagements e
on ent.entertainerid = e.entertainerid
join agents a
on e.agentid = a.agentid
```

	stage_name	engagement	contractprice	artist_pay_rate	artist_paid
1	Jim Glynn	2	200	0.9450000003	189
2	Jazz Persuasion	3	590	0.9499999993	560
3	Jim Glynn	4	470	0.9499999993	446
4	JV & the Deep Six	5	1,130	0.9549999982	1,079
5	Country Feeling	6	2,300	0.9649999999	2,219
6	Topazz	7	770	0.9450000003	728
7	Coldwater Cattle Company	8	1,850	0.9499999993	1,757
8	Saturday Revue	9	1,370	0.9600000009	1,315
9	JV & the Deep Six	10	3,650	0.9499999993	3,467

11. Top performing agents: Which agents consistently secure the highest-paying engagements?

    Insights: Agents like Carol Viescas and John Kennedy are generating the most revenue and handling a high number of engagements.They might be more experienced, or assigned high-value clients or musical styles.

```
SELECT a.AgentID, a.AgtFirstName, a.AgtLastName, COUNT(e.EngagementNumber)
AS TotalEngagements,
```

```
    SUM(e.ContractPrice) AS TotalRevenue
FROM Agents a
JOIN Engagements e ON a.AgentID = e.AgentID
GROUP BY a.AgentID, a.AgtFirstName, a.AgtLastName
ORDER BY TotalRevenue DESC
LIMIT 5;
```

agentid	agtfirstname	agtlastname	totalengagements	totalrevenue
3	Carol	Viescas	19	24,800
6	John	Kennedy	12	24,435
5	Marianne	Wier	18	22,635
1	William	Thompson	16	19,895
4	Karen	Smith	17	18,595

12. Loyal Customers: Which customers book multiple engagements? Are they loyal?

Insights: There's a segment of loyal customers that may respond well to targeted offers or loyalty programs like (*Zachary Ehrlich* with 13 bookings)

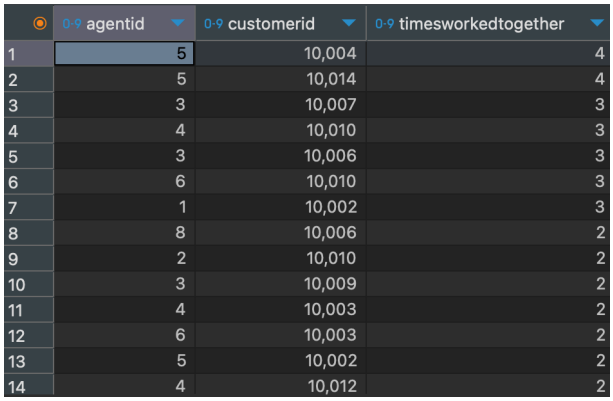
```
SELECT c.CustomerID, c.CustFirstName, c.CustLastName,
COUNT(e.EngagementNumber) AS EngagementsBooked
FROM Customers c
JOIN Engagements e ON c.CustomerID = e.CustomerID
GROUP BY c.CustomerID, c.CustFirstName, c.CustLastName
HAVING COUNT(e.EngagementNumber) > 1
ORDER BY EngagementsBooked DESC;
```

	customerid	custfirstname	custlastname	engagementsbooked
1	10,010	Zachary	Ehrlich	13
2	10,004	Dean	McCrae	11
3	10,002	Deb	Waldal	10
4	10,014	Mark	Rosales	10
5	10,006	Matt	Berg	9
6	10,009	Sarah	Thompson	8
7	10,005	Elizabeth	Hallmark	8
8	10,001	Doris	Hartwig	8
9	10,003	Peter	Brehm	7
10	10,012	Kerry	Patterson	7
11	10,007	Liz	Keyser	7
12	10,015	Carol	Viescas	7
13	10,013	Estella	Pundt	6

13. Agent–Customer Relationship Quality: Do certain agents work repeatedly with the same customers?

Insights: These strong relationships may result in smoother negotiations, higher satisfaction or easier sales (Agent 5 worked with Customer 10,004 multiple times)

```
SELECT a.AgentID, c.CustomerID, COUNT(*) AS TimesWorkedTogether
FROM Engagements e
JOIN Agents a ON e.AgentID = a.AgentID
JOIN Customers c ON e.CustomerID = c.CustomerID
GROUP BY a.AgentID, c.CustomerID
HAVING COUNT(*) > 1
ORDER BY TimesWorkedTogether DESC;
```



	agentid	customerid	timesworkedtogether
1	5	10,004	4
2	5	10,014	4
3	3	10,007	3
4	4	10,010	3
5	3	10,006	3
6	6	10,010	3
7	1	10,002	3
8	8	10,006	2
9	2	10,010	2
10	3	10,009	2
11	4	10,003	2
12	6	10,003	2
13	5	10,002	2
14	4	10,012	2

14. Most popular music styles: Which styles are most requested in Musical_Preferences?

```
SELECT ms.StyleName, COUNT(*) AS PreferenceCount
FROM Musical_Preferences mp
JOIN Musical_Styles ms ON mp.StyleID = ms.StyleID
GROUP BY ms.StyleName
ORDER BY PreferenceCount DESC;
```

	stylename	preferencecount
1	Standards	4
2	Rhythm and Blues	3
3	Contemporary	3
4	Jazz	3
5	Classic Rock & Roll	2
6	Classical	2
7	Salsa	2
8	40's Ballroom Music	2
9	Modern Rock	2
10	Top 40 Hits	2
11	Show Tunes	2
12	70's Music	1
13	Country Rock	1
14	Motown	1
15	Country	1
16	Folk	1
17	Variety	1
18	60's Music	1
19	80's Music	1
20	Chamber Music	1

15. Engagement Pricing by Music Style: Do certain musical styles command higher prices?

    Insights: Styles like Standards and Rhythm and Blues are most frequently requested.
    However, Country and 60’s Music command higher average prices.
    Popularity doesn't always equal profitability — pricing strategies could be optimized.

```
SELECT
    ms.StyleName,
    ROUND(AVG(e.ContractPrice), 2) AS AvgEngagementPrice
FROM Engagements e
JOIN Entertainers en ON e.EntertainerID = en.EntertainerID
JOIN Entertainer_Styles es ON en.EntertainerID = es.EntertainerID
JOIN Musical_Styles ms ON es.StyleID = ms.StyleID
GROUP BY ms.StyleName
ORDER BY AvgEngagementPrice DESC;
```

	stylename	avgengagementprice
1	Country	2,128.48
2	60's Music	2,049.2
3	Country Rock	1,859.38
4	Classic Rock & Roll	1,715
5	Top 40 Hits	1,376.32
6	70's Music	1,283.33
7	Variety	1,248.24
8	Contemporary	1,188.64
9	Salsa	1,181.18
10	Jazz	1,141.67
11	Standards	1,131.5
12	Motown	945.71
13	Rhythm and Blues	864.29
14	Show Tunes	811.84
15	Chamber Music	543.13
16	Classical	501.07
17	Folk	380

16. Revenue generated per engagement for each agent.

Insights: Consider replicating John's strategies or understanding his client/engagement type to raise average revenue for others. Maria may benefit from coaching or being matched with higher-value engagements.

```
SELECT a.AgentID, a.AgtFirstName, a.AgtLastName,
    COUNT(e.EngagementNumber) AS TotalEngagements,
    SUM(e.ContractPrice) AS TotalRevenue,
    ROUND(SUM(e.ContractPrice)::NUMERIC / COUNT(e.EngagementNumber), 2) AS
RevenuePerEngagement
FROM Agents a
JOIN Engagements e ON e.AgentID = a.AgentID
GROUP BY a.AgentID, a.AgtFirstName, a.AgtLastName
ORDER BY RevenuePerEngagement DESC;
```

	agentid	agtfirstname	agtlastname	totalengagements	totalrevenue	revenueperengagement
1	6	John	Kennedy	12	24,435	2,036.25
2	7	Caleb	Viescas	8	10,645	1,330.63
3	3	Carol	Viescas	19	24,800	1,305.26
4	5	Marianne	Wier	18	22,635	1,257.5
5	1	William	Thompson	16	19,895	1,243.44
6	2	Scott	Bishop	6	6,720	1,120
7	4	Karen	Smith	17	18,595	1,093.82
8	8	Maria	Patterson	15	12,825	855

17. Compare most requested styles vs. styles with low engagement prices.

Insight:

- Useful to flag undervalued services that are popular and could justify a price increase.
- Promote Country music to increase profitability—either by recruiting more entertainers in that style or nudging client preferences.
- Consider up-marketing low-price styles like Folk to make them more viable.

```
SELECT ms.StyleName,
    COUNT(mp.StyleID) AS PreferenceCount,
    ROUND(AVG(e.ContractPrice), 2) AS AvgPrice
FROM Musical_Preferences mp
JOIN Musical_Styles ms ON ms.StyleID = mp.StyleID
JOIN Entertainer_Styles es ON es.StyleID = ms.StyleID
JOIN Entertainers en ON en.EntertainerID = es.EntertainerID
JOIN Engagements e ON e.EntertainerID = en.EntertainerID
GROUP BY ms.StyleName
HAVING COUNT(mp.StyleID) > 2
ORDER BY AvgPrice ASC;
```

	A-Z stylename	0-9 preferencecount	0-9 avgprice
1	Folk	15	380
2	Classical	28	501.07
3	Chamber Music	8	543.13
4	Show Tunes	38	811.84
5	Rhythm and Blues	42	864.29
6	Motown	7	945.71
7	Standards	80	1,131.5
8	Jazz	54	1,141.67
9	Salsa	34	1,181.18
10	Contemporary	66	1,188.64
11	Variety	17	1,248.24
12	70's Music	9	1,283.33
13	Top 40 Hits	38	1,376.32
14	Classic Rock & Roll	20	1,715
15	Country Rock	8	1,859.38
16	60's Music	25	2,049.2
17	Country	23	2,128.48

18. Agents with Most Frequent Bookings Per Month

```
WITH MonthlyEngagements AS (
  SELECT
    AgentID,
```

```
    DATE_TRUNC('month', StartDate) AS Month,
    COUNT(*) AS Engagements
  FROM Engagements
  GROUP BY AgentID, DATE_TRUNC('month', StartDate)
),
TopMonthlyAgents AS (
  SELECT
    AgentID,
    MAX(Engagements) AS MaxMonthlyEngagements
  FROM MonthlyEngagements
  GROUP BY AgentID
)
SELECT A.AgentID, A.AgtFirstName, A.AgtLastName, T.MaxMonthlyEngagements
FROM Agents A
JOIN TopMonthlyAgents T ON A.AgentID = T.AgentID
ORDER BY T.MaxMonthlyEngagements DESC;
```

agentid	agtfirstname	agtlastname	maxmonthlyengagements
6	John	Kennedy	7
4	Karen	Smith	6
1	William	Thompson	5
5	Marianne	Wier	5
8	Maria	Patterson	4
3	Carol	Viescas	4
2	Scott	Bishop	2
7	Caleb	Viescas	2

19. Agents with Declining Revenue Quarter-over-Quarter

```
WITH QuarterlyRevenue AS (
  SELECT
    AgentID,
    DATE_TRUNC('quarter', StartDate) AS Quarter,
    SUM(ContractPrice) AS Revenue
  FROM Engagements
  GROUP BY AgentID, DATE_TRUNC('quarter', StartDate)
),
RevenueTrend AS (
  SELECT *,
```

```
        LAG(Revenue) OVER (PARTITION BY AgentID ORDER BY Quarter) AS
PrevRevenue
  FROM QuarterlyRevenue
)
SELECT *
FROM RevenueTrend
WHERE PrevRevenue IS NOT NULL AND Revenue < PrevRevenue
ORDER BY AgentID, Quarter;
```

agentid	quarter	revenue	prevrevenue
1	2018-01-01 00:00:00+00	7145.00	8460.00
2	2017-10-01 00:00:00+00	1270.00	1370.00
3	2018-01-01 00:00:00+00	6550.00	11690.00
4	2018-01-01 00:00:00+00	6520.00	10155.00
7	2018-01-01 00:00:00+00	3885.00	4460.00
8	2018-01-01 00:00:00+00	4390.00	5870.00

20. Agent Rebooking Efficiency (Customer Retention Rate per Agent)

```
WITH FirstEngagement AS (
  SELECT
    CustomerID,
    MIN(StartDate) AS FirstDate
  FROM Engagements
  GROUP BY CustomerID
),
EngagementsWithFirst AS (
  SELECT
    e.*,
    f.FirstDate
  FROM Engagements e
  JOIN FirstEngagement f ON e.CustomerID = f.CustomerID
),
RebookingStats AS (
  SELECT
    AgentID,
    COUNT(*) FILTER (WHERE StartDate > FirstDate) AS RepeatBookings,
    COUNT(*) AS TotalBookings
  FROM EngagementsWithFirst
```

```
  GROUP BY AgentID
)
SELECT
  AgentID,
  TotalBookings,
  RepeatBookings,
  ROUND(100.0 * RepeatBookings / NULLIF(TotalBookings, 0), 2) AS
RebookingRatePercent
FROM RebookingStats
ORDER BY RebookingRatePercent DESC;
```

agentid	totalbookings	repeatbookings	rebookingratepercent
6	12	12	100.00
5	18	18	100.00
1	16	15	93.75
3	19	17	89.47
8	15	13	86.67
2	6	5	83.33
7	8	6	75.00
4	17	12	70.59

21. Average Booking Duration per Agent

Insights: A list of agents with their average engagement (booking) duration in days, ranked from longest to shortest.

agentid	AgentName	AvgBookingDuration_Days
6	John Kennedy	6.92
2	Scott Bishop	5.67
3	Carol Viescas	5.58
7	Caleb Viescas	5.13
1	William Thompson	4.69
4	Karen Smith	4.65
5	Marianne Wier	4.50
8	Maria Patterson	4.40

```
SELECT
    a.agentid,
```

```
    a.agtfirstname || ' ' || a.agtlastname AS "AgentName",
    ROUND(AVG(e.enddate - e.startdate), 2) AS "AvgBookingDuration_Days"
FROM
    Engagements e
JOIN agents a ON e.agentid = a.agentid
WHERE e.startdate IS NOT NULL AND e.enddate IS NOT NULL
GROUP BY
    a.agentid, a.agtfirstname, a.agtlastname
ORDER BY
    "AvgBookingDuration_Days" DESC;
```

22. Monthly Revenue by Agent

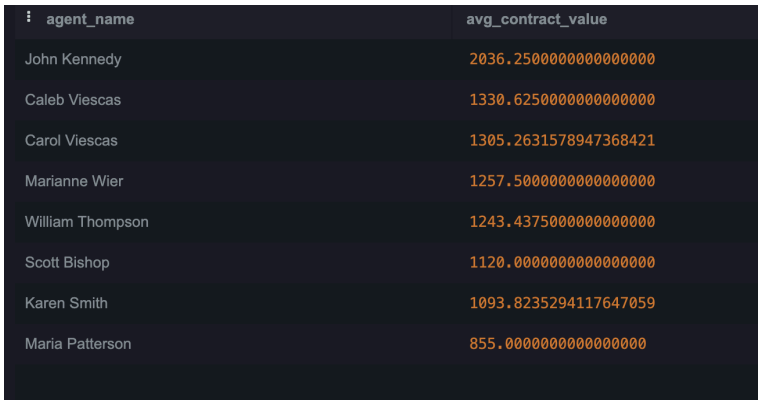
Insights: Helps stakeholders track how each agent's revenue changes over months. Spikes may indicate successful campaigns, high-demand seasons, or exceptional deal closures.

```
SELECT
    a.agtfirstname || ' ' || a.agtlastname AS agent_name,
    DATE_TRUNC('month', e.startdate) AS month,
    SUM(e.contractprice) AS revenue
FROM engagements e
JOIN agents a ON e.agentid = a.agentid
GROUP BY agent_name, month
ORDER BY agent_name, month;
```

agent_name	month	revenue
Caleb Viescas	1	2525.00
Caleb Viescas	2	1360.00
Caleb Viescas	9	2300.00
Caleb Viescas	10	3460.00
Caleb Viescas	12	1000.00
Carol Viescas	1	2850.00
Carol Viescas	2	3700.00
Carol Viescas	9	6560.00
Carol Viescas	10	6170.00
Carol Viescas	11	3620.00
Carol Viescas	12	1900.00

23. Average Contract Value per Agent

```
SELECT
    a.agtfirstname || ' ' || a.agtlastname AS agent_name,
    AVG(e.contractprice) AS avg_contract_value
FROM engagements e
JOIN agents a ON e.agentid = a.agentid
GROUP BY agent_name
ORDER BY avg_contract_value DESC;
```

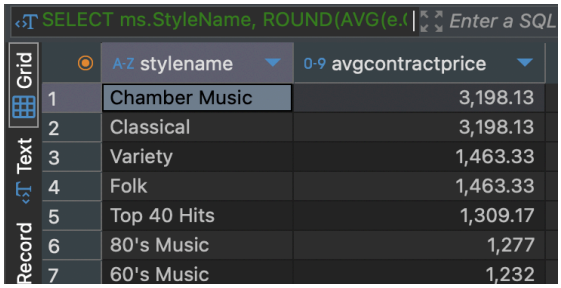


agent_name	avg_contract_value
John Kennedy	2036.2500000000000000
Caleb Viescas	1330.6250000000000000
Carol Viescas	1305.2631578947368421
Marianne Wier	1257.5000000000000000
William Thompson	1243.4375000000000000
Scott Bishop	1120.0000000000000000
Karen Smith	1093.8235294117647059
Maria Patterson	855.0000000000000000

24. Average Contract Price by Preferred Style

Insights: Evaluates which genres are tied to higher average spending. Why it matters: Shows where premium pricing exists. Leads to: Pinpointing high-spending individuals in premium genres.

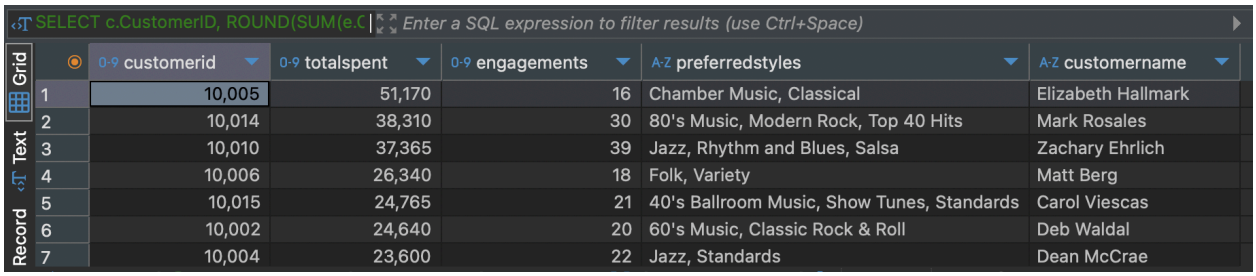
```
SELECT ms.StyleName, ROUND(AVG(e.ContractPrice), 2) AS AvgContractPrice
FROM Musical_Preferences mp
JOIN Musical_Styles ms ON mp.StyleID = ms.StyleID
JOIN Engagements e ON mp.CustomerID = e.CustomerID
GROUP BY ms.StyleName
ORDER BY AvgContractPrice DESC
LIMIT 10;
```



25. High-Spending Customers and Their Preferences

Insights: Profiles top spenders and what styles they like. Why it matters: Reveals which customers and styles drive revenue. Leads to: Matching their preferences with booking behavior.

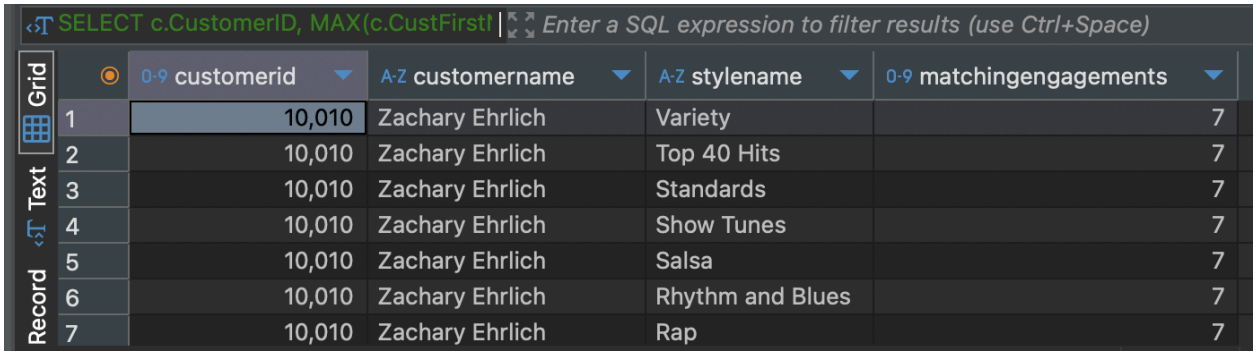
```
SELECT c.CustomerID,
    ROUND(SUM(e.ContractPrice), 2) AS TotalSpent,
    COUNT(e.EngagementNumber) AS Engagements,
    STRING_AGG(DISTINCT ms.StyleName, ', ') AS PreferredStyles,
    MAX(c.CustFirstName || ' ' || c.CustLastName) AS CustomerName
FROM Customers c
JOIN Engagements e ON c.CustomerID = e.CustomerID
JOIN Musical_Preferences mp ON c.CustomerID = mp.CustomerID
JOIN Musical_Styles ms ON mp.StyleID = ms.StyleID
GROUP BY c.CustomerID
HAVING SUM(e.ContractPrice) > 2000
ORDER BY TotalSpent DESC;
```



26. Style-Aligned Customer Bookings

Insights: Measures how often customers book artists that match their genre preferences. Why it matters: Indicates behavioral loyalty and satisfaction. Leads to: Understanding if genre-match leads to higher spend.

```
SELECT c.CustomerID,
    MAX(c.CustFirstName || ' ' || c.CustLastName) AS CustomerName,
    ms.StyleName,
    COUNT(*) AS MatchingEngagements
FROM Engagements e
JOIN Customers c ON e.CustomerID = c.CustomerID
JOIN Musical_Preferences mp ON c.CustomerID = mp.CustomerID
JOIN Entertainers en ON e.EntertainerID = en.EntertainerID
JOIN Entertainer_Styles es ON en.EntertainerID = es.EntertainerID
JOIN Musical_Styles ms ON mp.StyleID = es.StyleID
WHERE mp.StyleID = es.StyleID
GROUP BY c.CustomerID, ms.StyleName
ORDER BY MatchingEngagements DESC;
```

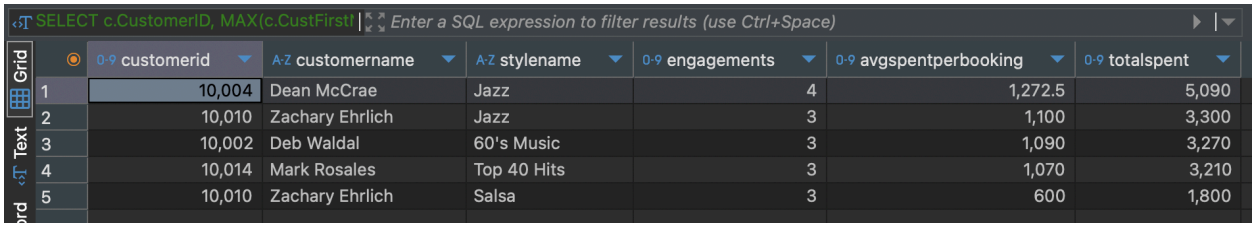


	customerid	customername	stylename	matchingengagements
1	10,010	Zachary Ehrlich	Variety	7
2	10,010	Zachary Ehrlich	Top 40 Hits	7
3	10,010	Zachary Ehrlich	Standards	7
4	10,010	Zachary Ehrlich	Show Tunes	7
5	10,010	Zachary Ehrlich	Salsa	7
6	10,010	Zachary Ehrlich	Rhythm and Blues	7
7	10,010	Zachary Ehrlich	Rap	7

27. Customer + Style Combinations with High Spend

Insights: Combines loyalty and spending across specific customer-style pairs. Why it matters: Reveals style-based revenue clusters. Leads to: Assessing which entertainers and agents contribute to this alignment.

```
SELECT c.CustomerID,
    MAX(c.CustFirstName || ' ' || c.CustLastName) AS CustomerName,
    ms.StyleName,
    COUNT(DISTINCT e.EngagementNumber) AS Engagements,
    ROUND(AVG(e.ContractPrice), 2) AS AvgSpentPerBooking,
    ROUND(SUM(e.ContractPrice), 2) AS TotalSpent
FROM Customers c
JOIN Musical_Preferences mp ON c.CustomerID = mp.CustomerID
JOIN Musical_Styles ms ON mp.StyleID = ms.StyleID
JOIN Engagements e ON c.CustomerID = e.CustomerID
JOIN Entertainers en ON e.EntertainerID = en.EntertainerID
JOIN Entertainer_Styles es ON en.EntertainerID = es.EntertainerID
WHERE mp.StyleID = es.StyleID
GROUP BY c.CustomerID, ms.StyleName
HAVING COUNT(DISTINCT e.EngagementNumber) >= 3
ORDER BY TotalSpent DESC;
```

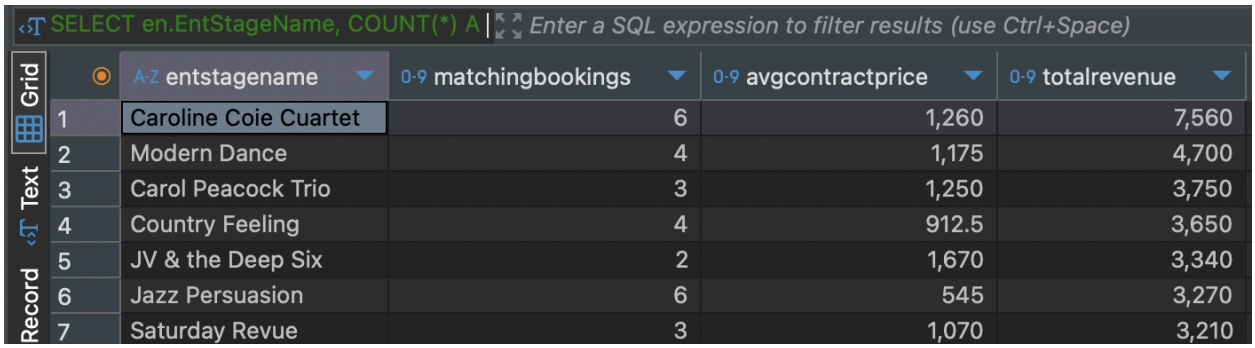


	customerid	customername	stylename	engagements	avgspentperbooking	totalspent
1	10,004	Dean McCrae	Jazz	4	1,272.5	5,090
2	10,010	Zachary Ehrlich	Jazz	3	1,100	3,300
3	10,002	Deb Waldal	60's Music	3	1,090	3,270
4	10,014	Mark Rosales	Top 40 Hits	3	1,070	3,210
5	10,010	Zachary Ehrlich	Salsa	3	600	1,800

28. Top Entertainers by Preference-Aligned Bookings

Insights: Identifies entertainers most often booked when preferences align. Why it matters: These are high-ROI artists to promote. Leads to: Checking if certain agents are responsible for that alignment.

```
SELECT en.EntStageName, COUNT(*) AS MatchingBookings,
    ROUND(AVG(e.ContractPrice), 2) AS AvgContractPrice,
ROUND(SUM(e.ContractPrice), 2) AS TotalRevenue
FROM Engagements e
JOIN Customers c ON e.CustomerID = c.CustomerID
JOIN Entertainers en ON e.EntertainerID = en.EntertainerID
JOIN Entertainer_Styles es ON en.EntertainerID = es.EntertainerID
JOIN Musical_Preferences mp ON c.CustomerID = mp.CustomerID
WHERE mp.StyleID = es.StyleID
GROUP BY en.EntStageName
ORDER BY TotalRevenue DESC;
```



SELECT en.EntStageName, COUNT(*) A | Enter a SQL expression to filter results (use Ctrl+Space)

Grid | Text | Record

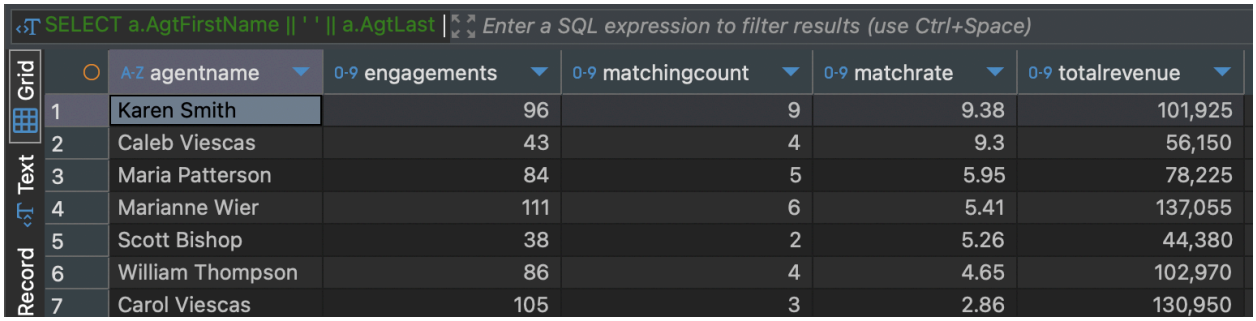
	entstagename	matchingbookings	avgcontractprice	totalrevenue
1	Caroline Coie Cuartet	6	1,260	7,560
2	Modern Dance	4	1,175	4,700
3	Carol Peacock Trio	3	1,250	3,750
4	Country Feeling	4	912.5	3,650
5	JV & the Deep Six	2	1,670	3,340
6	Jazz Persuasion	6	545	3,270
7	Saturday Revue	3	1,070	3,210

29. Agent Success in Matching Preferences

Insights: Evaluates which agents consistently match preferences to bookings. Why it matters: Highlights top-performing agents by customer satisfaction and revenue. Leads to: Analyzing duration and premium engagement patterns.

```
SELECT a.AgtFirstName || ' ' || a.AgtLastName AS AgentName,
    COUNT(*) AS Engagements,
    SUM(CASE WHEN mp.StyleID = es.StyleID THEN 1 ELSE 0 END) AS
MatchingCount,
    ROUND(100.0 * SUM(CASE WHEN mp.StyleID = es.StyleID THEN 1 ELSE 0 END)
/ COUNT(*), 2) AS MatchRate,
    ROUND(SUM(e.ContractPrice), 2) AS TotalRevenue
FROM Engagements e
JOIN Agents a ON e.AgentID = a.AgentID
```

```
JOIN Customers c ON e.CustomerID = c.CustomerID
JOIN Entertainers en ON e.EntertainerID = en.EntertainerID
JOIN Entertainer_Styles es ON en.EntertainerID = es.EntertainerID
JOIN Musical_Preferences mp ON c.CustomerID = mp.CustomerID
GROUP BY AgentName
ORDER BY MatchRate DESC;
```



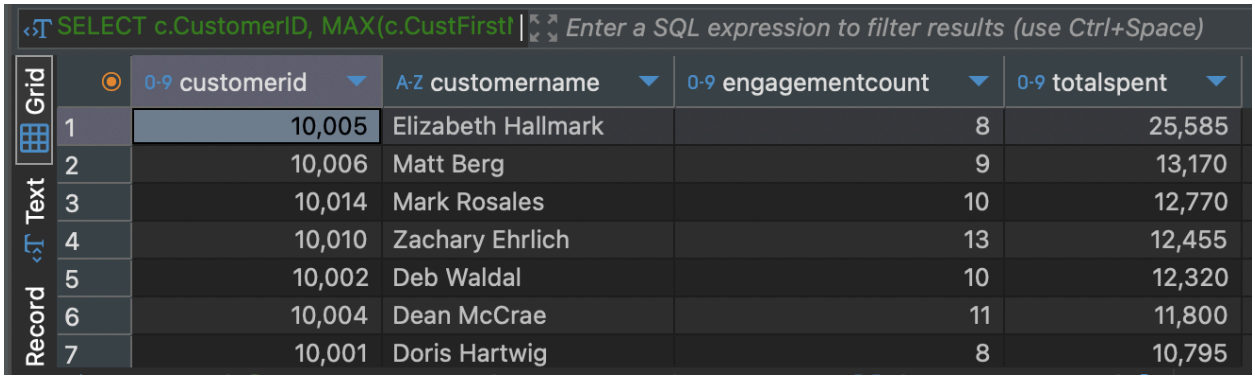
SELECT a.AgtFirstName || ' ' || a.AgtLast | Enter a SQL expression to filter results (use Ctrl+Space)

Grid | Text | Record

	agentname	engagements	matchingcount	matchrate	totalrevenue
1	Karen Smith	96	9	9.38	101,925
2	Caleb Viescas	43	4	9.3	56,150
3	Maria Patterson	84	5	5.95	78,225
4	Marianne Wier	111	6	5.41	137,055
5	Scott Bishop	38	2	5.26	44,380
6	William Thompson	86	4	4.65	102,970
7	Carol Viescas	105	3	2.86	130,950

30. Repeat Customers and Cumulative Spend

```
SELECT c.CustomerID,
    MAX(c.CustFirstName || ' ' || c.CustLastName) AS CustomerName,
    COUNT(e.EngagementNumber) AS EngagementCount,
    ROUND(SUM(e.ContractPrice), 2) AS TotalSpent
FROM Customers c
JOIN Engagements e ON c.CustomerID = e.CustomerID
GROUP BY c.CustomerID
HAVING COUNT(e.EngagementNumber) > 1
ORDER BY TotalSpent DESC;
```



SELECT c.CustomerID, MAX(c.CustFirstI | Enter a SQL expression to filter results (use Ctrl+Space)

Grid | Text | Record

	customerid	customername	engagementcount	totalspent
1	10,005	Elizabeth Hallmark	8	25,585
2	10,006	Matt Berg	9	13,170
3	10,014	Mark Rosales	10	12,770
4	10,010	Zachary Ehrlich	13	12,455
5	10,002	Deb Waldal	10	12,320
6	10,004	Dean McCrae	11	11,800
7	10,001	Doris Hartwig	8	10,795

31. Overlooked Customer Segments

How many customer preferences are / aren't available

```
SELECT
  CASE
    WHEN es.StyleID IS NOT NULL THEN 'Offered'
    ELSE 'Not Offered'
  END AS Availability,
  COUNT(DISTINCT mp.StyleID) AS StyleCount
FROM Musical_Preferences mp
LEFT JOIN Entertainer_Styles es ON mp.StyleID = es.StyleID
GROUP BY
  CASE
    WHEN es.StyleID IS NOT NULL THEN 'Offered'
    ELSE 'Not Offered'
  END;
```

	availability	stylecount
1	Not Offered	3
2	Offered	17

Which Customer preferences are / aren't available

```
SELECT
  ms.StyleName AS custpref,
  CASE
    WHEN es.StyleID IS NOT NULL THEN 'Offered'
    ELSE 'Not Offered'
  END AS available
FROM Musical_Preferences mp
JOIN Musical_Styles ms ON mp.StyleID = ms.StyleID
LEFT JOIN Entertainer_Styles es ON mp.StyleID = es.StyleID
GROUP BY ms.StyleName, es.StyleID
ORDER BY ms.StyleName;
```

	custpref	available
1	40's Ballroom Music	Not Offered
2	60's Music	Offered
3	70's Music	Offered
4	80's Music	Not Offered
5	Chamber Music	Offered
6	Classic Rock & Roll	Offered
7	Classical	Offered
8	Contemporary	Offered
9	Country	Offered
10	Country Rock	Offered
11	Folk	Offered
12	Jazz	Offered

How many customers aren't having preferences met (individual customers)

```
SELECT
  CASE
    WHEN es.StyleID IS NOT NULL THEN 'Offered'
    ELSE 'Not Offered'
  END AS Availability,
  COUNT(DISTINCT mp.CustomerID) AS CustomerCount
FROM Musical_Preferences mp
LEFT JOIN Entertainer_Styles es ON mp.StyleID = es.StyleID
GROUP BY
  CASE
    WHEN es.StyleID IS NOT NULL THEN 'Offered'
    ELSE 'Not Offered'
  END;
```

	availability	customercount
1	Not Offered	4
2	Offered	15

Of the styles not offered, how many customers are interested in each

```
SELECT
  ms.StyleName,
  COUNT(DISTINCT mp.CustomerID) AS CustomerCount
FROM Musical_Preferences mp
JOIN Musical_Styles ms ON mp.StyleID = ms.StyleID
LEFT JOIN Entertainer_Styles es ON mp.StyleID = es.StyleID
WHERE es.StyleID IS NULL
GROUP BY ms.StyleName
ORDER BY CustomerCount DESC;
END;
```

	stylename	customercount
1	40's Ballroom Music	2
2	Modern Rock	2
3	80's Music	1

32. Excessively low-priced engagements

Insight: A significant portion of engagements—45.95%—were priced below $800, with some as low as $110. Given the average price of $1,266.22 and a maximum of over $14,000, this wide disparity suggests a lack of consistent pricing standards. These low-value contracts may consume similar resources as higher-priced ones, highlighting an inefficiency in revenue optimization and pricing policy.

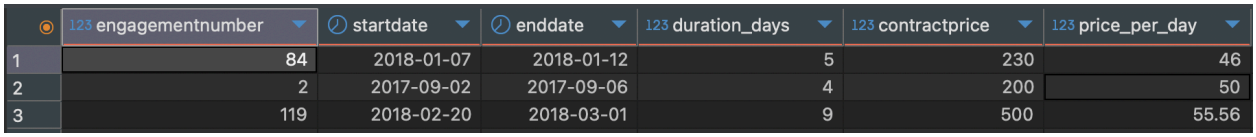
```
SELECT
 SUM(CASE WHEN contractprice < 800 THEN 1 ELSE 0 END) AS low_price_count,
 SUM(CASE WHEN contractprice < 800 THEN 1 ELSE 0 END) * 100.0 / COUNT(*) AS
low_price_percentage,
 AVG(contractprice) AS avg_price,
 MIN(contractprice) AS min_price,
 MAX(contractprice) AS max_price
FROM Engagements;
```

low_price_count	low_price_percentage	avg_price	min_price	max_price
51	45.9459459459	1,266.2162162162	110	14,105

33. Long-duration events not priced accordingly

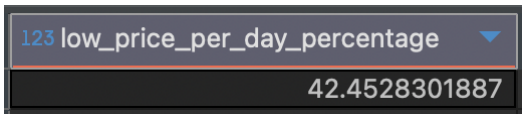
Insight: Among multi-day engagements, 42.45% earned less than $200 per day, with some extreme cases—like a 5-day event earning only $46/day. Surprisingly, events lasting 6–10 days had the lowest average daily rate at $195.71, while both 1–2 day and 11+ day events exceeded $440/day. This inconsistency indicates that longer engagements are underpriced beyond what volume-based discounts would typically justify.

```
SELECT
 engagementnumber,
 startdate,
 enddate,
 (enddate - startdate) AS duration_days,
 contractprice,
 ROUND(contractprice / NULLIF((enddate - startdate), 0), 2) AS price_per_day
FROM Engagements
WHERE (enddate - startdate) > 0
ORDER BY price_per_day ASC;
```



	engagementnumber	startdate	enddate	duration_days	contractprice	price_per_day
1	84	2018-01-07	2018-01-12	5	230	46
2	2	2017-09-02	2017-09-06	4	200	50
3	119	2018-02-20	2018-03-01	9	500	55.56

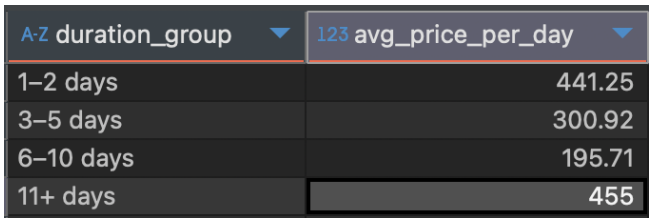
```
SELECT
 COUNT(*) FILTER (
   WHERE contractprice / NULLIF((enddate - startdate), 0) < 200
 ) * 100.0 / COUNT(*) AS low_price_per_day_percentage
FROM Engagements
WHERE (enddate - startdate) > 0
```



low_price_per_day_percentage
42.4528301887

```
SELECT
 duration_group,
 ROUND(AVG(price_per_day), 2) AS avg_price_per_day
FROM (
 SELECT
   (enddate - startdate) AS duration_days,
   contractprice / NULLIF((enddate - startdate), 0) AS price_per_day,
   CASE
```

```
    WHEN (enddate - startdate) BETWEEN 1 AND 2 THEN '1–2 days'
    WHEN (enddate - startdate) BETWEEN 3 AND 5 THEN '3–5 days'
    WHEN (enddate - startdate) BETWEEN 6 AND 10 THEN '6–10 days'
    ELSE '11+ days'
  END AS duration_group
 FROM Engagements
 WHERE (enddate - startdate) > 0
) AS grouped
GROUP BY duration_group
ORDER BY duration_group;
```



A-Z duration_group	123 avg_price_per_day
1–2 days	441.25
3–5 days	300.92
6–10 days	195.71
11+ days	455

34. High-commission agents with low output

Insight: There is a clear mismatch between commission rates and performance among agents. While Karen Smith earns a 5.5% commission, her average contract value is only $1,093.82, compared to $2,036.25 for John Kennedy, who earns 6%. More critically, Daffy Dumbwit receives a 1% commission but has recorded no bookings, suggesting a misalignment between incentives and actual contribution.

```
SELECT
 a.agentid,
 a.agtfirstname || ' ' || a.agtlastname AS agent_name,
 a.commissionrate,
 COUNT(e.engagementnumber) AS total_engagements,
 ROUND(AVG(e.contractprice), 2) AS avg_contract_value
FROM agents a
LEFT JOIN engagements e ON a.agentid = e.agentid
GROUP BY a.agentid, agent_name, a.commissionrate
ORDER BY a.commissionrate DESC;
```

agentid	agent_name	commissionrate	total_engagements	avg_contract_value
6	John Kennedy	0.06	12	2,036.25
4	Karen Smith	0.055	17	1,093.82
3	Carol Viescas	0.05	19	1,305.26
5	Marianne Wier	0.045	18	1,257.5
8	Maria Patterson	0.04	15	855
2	Scott Bishop	0.04	6	1,120
1	William Thompson	0.04	16	1,243.44
7	Caleb Viescas	0.035	8	1,330.63
9	Daffy Dumbwit	0.01	0	[NULL]

35. Repeat customers not leveraged

Insight: Although 86.67% of all customers booked more than once, the data reveals no evidence of loyalty programs, special offers, or personalized incentives being offered to these repeat clients. This represents a missed opportunity to maximize customer lifetime value and build long-term relationships through targeted retention strategies.

```
SELECT
 COUNT(*) * 100.0 / (SELECT COUNT(DISTINCT customerid) FROM Customers) AS
repeat_customer_percentage
FROM (
 SELECT customerid
 FROM Engagements
 GROUP BY customerid
 HAVING COUNT(*) > 1
) AS repeat_customers;
```

repeat_customer_percentage
86.6666666667

36. Supply-Demand Imbalance Across Musical Styles

Insight: Several musical styles show mismatches between customer demand and entertainer supply, including both undersupplied and oversupplied styles.

```
WITH customer_demand AS (
  SELECT styleid, COUNT(DISTINCT customerid) AS customer_demand
  FROM musical_preferences
  GROUP BY styleid
),
entertainer_supply AS (
```

```
  SELECT styleid, COUNT(DISTINCT entertainerid) AS entertainer_supply
  FROM entertainer_styles
  GROUP BY styleid
)
SELECT
  ms.stylename,
  cd.customer_demand,
  COALESCE(es.entertainer_supply, 0) AS entertainer_supply,
  ROUND(COALESCE(es.entertainer_supply, 0) * 1.0 / NULLIF(cd.customer_demand,
0), 2) AS supply_demand_ratio,
  CASE
    WHEN es.entertainer_supply IS NULL THEN 'No Supply'
    WHEN COALESCE(es.entertainer_supply, 0) * 1.0 / NULLIF(cd.customer_demand, 0)
< 1 THEN 'Undersupplied'
    WHEN COALESCE(es.entertainer_supply, 0) * 1.0 / NULLIF(cd.customer_demand, 0)
> 1 THEN 'Oversupplied'
    ELSE 'Balanced'
  END AS supply_status
FROM customer_demand cd
LEFT JOIN entertainer_supply es ON cd.styleid = es.styleid
JOIN musical_styles ms ON cd.styleid = ms.styleid
ORDER BY supply_demand_ratio;
```

A-Z stylename	123 customer_demand	123 entertainer_supply	123 supply_demand_ratio	A-Z supply_status
40's Ballroom Music	2	0	0	No Supply
Modern Rock	2	0	0	No Supply
80's Music	1	0	0	No Supply
Classic Rock & Roll	2	1	0.5	Undersupplied
Contemporary	3	2	0.67	Undersupplied
Jazz	3	2	0.67	Undersupplied
Rhythm and Blues	3	2	0.67	Undersupplied
Standards	4	3	0.75	Undersupplied
Salsa	2	2	1	Balanced
70's Music	1	1	1	Balanced
Country Rock	1	1	1	Balanced
Motown	1	1	1	Balanced
Show Tunes	2	2	1	Balanced

Top 40 Hits	2	2	1	Balanced
Classical	2	3	1.5	Oversupplied
Variety	1	2	2	Oversupplied
Country	1	2	2	Oversupplied
Chamber Music	1	2	2	Oversupplied
60's Music	1	2	2	Oversupplied
Folk	1	2	2	Oversupplied

37. Inefficient distribution of entertainers

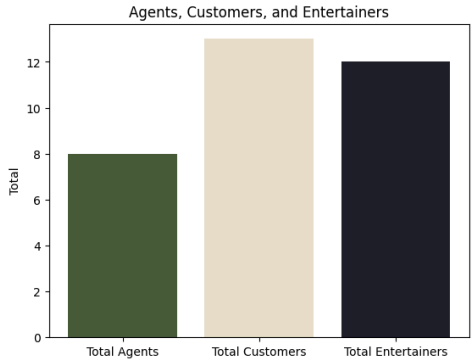
Insights: The entertainer booking distribution is highly uneven. Katherine Ehrlich, for example, has never been booked, and others like Susan McLain and Topazz have only 6–7 bookings—much fewer than peers like Country Feeling, who has 15. This underutilization may stem from poor matchmaking, visibility, or promotional efforts, limiting the platform's ability to fully capitalize on available talent.

```
SELECT
 e.entertainerid,
 e.entstagename,
 COUNT(g.engagementnumber) AS num_engagements
FROM Entertainers e
LEFT JOIN Engagements g ON e.entertainerid = g.entertainerid
GROUP BY e.entertainerid, e.entstagename
ORDER BY num_engagements ASC;
```

123 entertainerid	A-Z entstagename	123 num_engagements
1,009	Katherine Ehrlich	0
1,012	Susan McLain	6
1,002	Topazz	7
1,005	Jazz Persuasion	7
1,011	Julia Schnebly	8
1,007	Coldwater Cattle Company	8
1,004	Jim Glynn	9
1,010	Saturday Revue	9
1,006	Modern Dance	10
1,003	JV & the Deep Six	10
1,013	Caroline Coie Cuartet	11
1,001	Carol Peacock Trio	11
1,008	Country Feeling	15

Discussions & Observations

How do different parts of the business interact?



1. **The Booking Workflow (Query #1)**

    · Each engagement the agency handles follows a chain of interaction initiated by the customer, facilitated by the agent, and fulfilled by the entertainer.

    · Customers are seeking live entertainment for their events, so they contact an agent who tailors the experience to their musical tastes. The agent identifies entertainers who can fulfil the request.

    · The presence of the agent helps ensure good matchmaking for the type of entertainment needed and the nature of the event.

2. **Agent-Entertainer Collaboration (Query #4)**

    · Agents specialize in booking entertainers with specific musical styles, which can be identified by the presence of multiple bookings between the same agent and entertainer.

    · This may improve business efficiency because agents can build rapport with their frequently-booked entertainers and enhance the agency's brand.

3. **Customer Loyalty to Performers (Query #5)**

    · Many customers have repeat bookings with the same entertainers, indicating that they were satisfied after an initial performance and returned to the agency to book again.

    · Customer loyalty is critically important to the business because repeat bookings represent a large portion of total revenue for the business and create high potential for future revenue and growth.

4. **Agent Commissions and Business Model Implications (Query #9)**

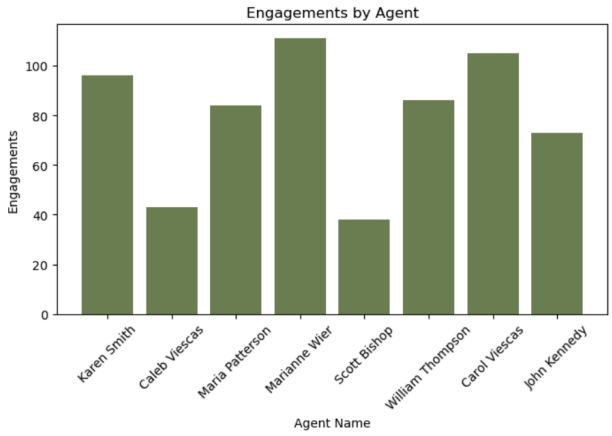
- Agent compensation consists of both salary and a commission derived from each engagement's contract value. Commission rates are generally between 4 and 6%, meaning conversely that entertainers receive between 94 and 96% of a contract's value.

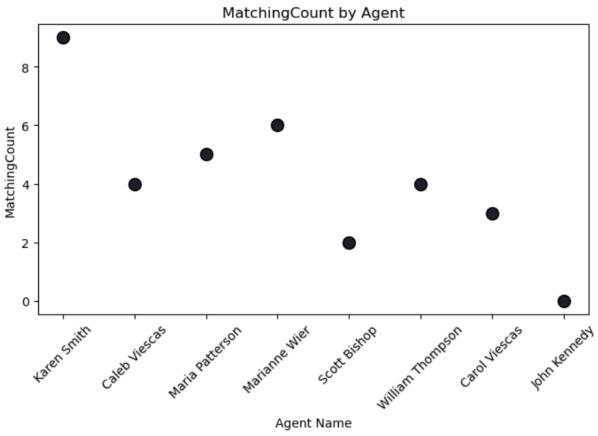
- A broader financial question for the agency is whether agents and entertainers are represented internally or if the organization serves as a booking intermediary, which will influence whether these commission expenses are categorized as internal payroll or external costs.

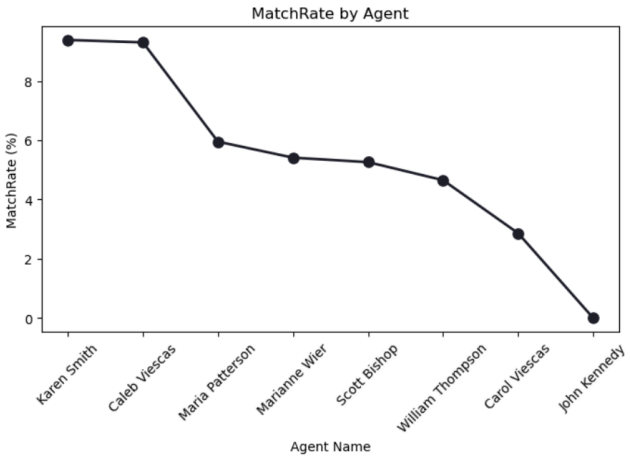
Stories Hidden in the Data

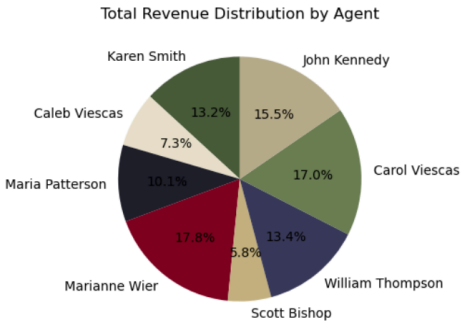
AGENTS

Agent Success in Matching Preferences









What it does: Evaluates which agents consistently match preferences to bookings.

Why it matters: Highlights top-performing agents by customer satisfaction and revenue.

Leads to: Analyzing duration and premium engagement patterns.

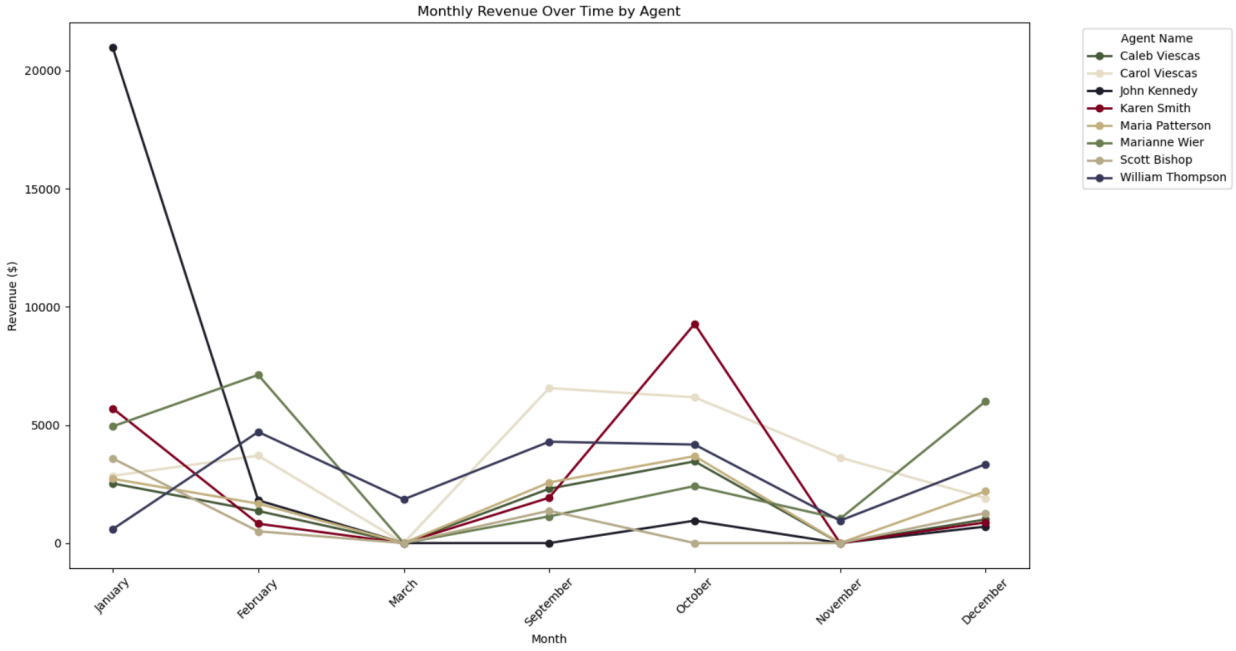
Karen Smith had a **9.4% style match rate** and generated **$100K+** in revenue — well above the agent average.

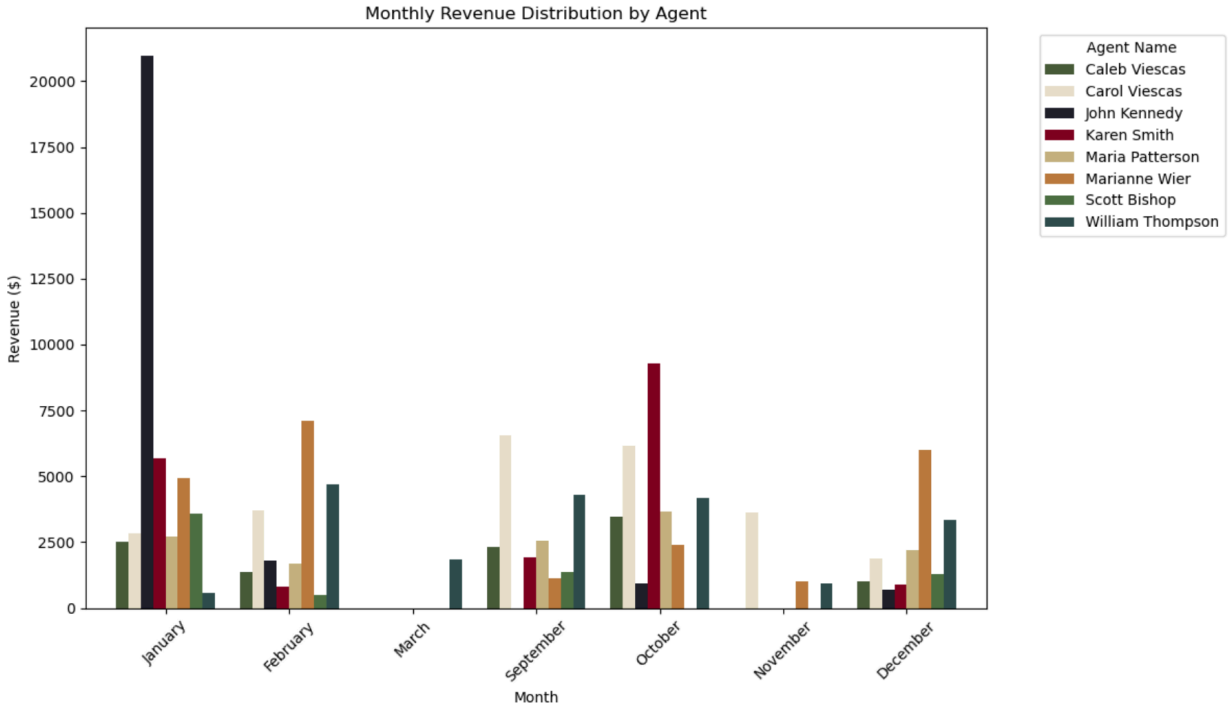
Other agents booked more but matched less — indicating inefficiency in translating customer taste into bookings.

Action: Use these metrics to retrain or incentivize agents on preference-aligned booking behavior.

Monthly Revenue by Agent

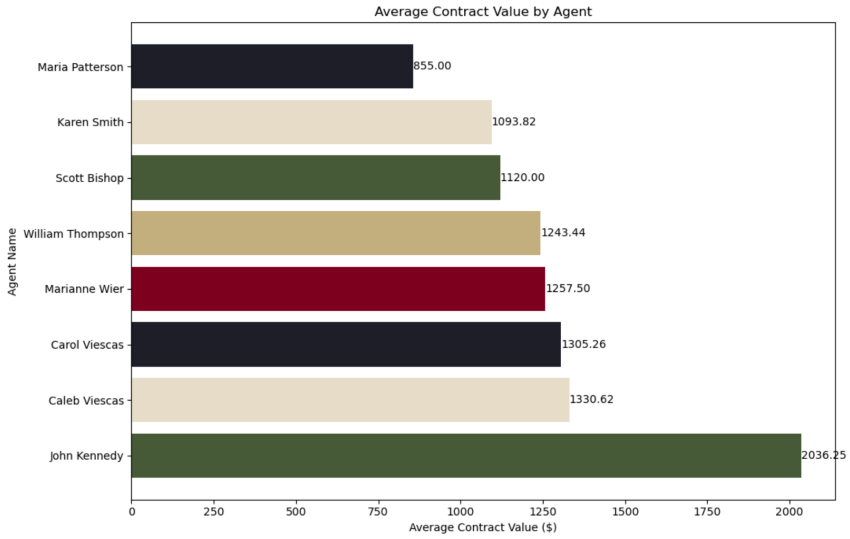
- Helps stakeholders track how each agent's revenue changes over months. Spikes may indicate successful campaigns, high-demand seasons, or exceptional deal closures.
- A sudden drop in an agent's revenue may signal problems like poor customer follow-up, less active entertainers, or market shifts.
- Identifies which months are most lucrative, aiding in marketing, staffing, and resource allocation decisions.





Average Contract Value per Agent

- While engagement count shows volume, this KPI reveals how valuable those engagements are. An agent closing fewer but larger contracts might outperform one with high volume but low value.
- High average contract values suggest stronger negotiation or targeting of high-budget clients.
- Helps categorize agents into high-value closers vs. high-volume performers, guiding different training or incentive plans.
- Risk Management: If an agent has unusually low average contract value, it may indicate underpricing, poor client targeting, or weak value propositions.



CUSTOMERS

High-Spending Customers and Their Preferences

What it does: Profiles top spenders and what styles they like. **Why it matters:** Reveals which customers and styles drive revenue. **Leads to:** Matching their preferences with booking behavior.

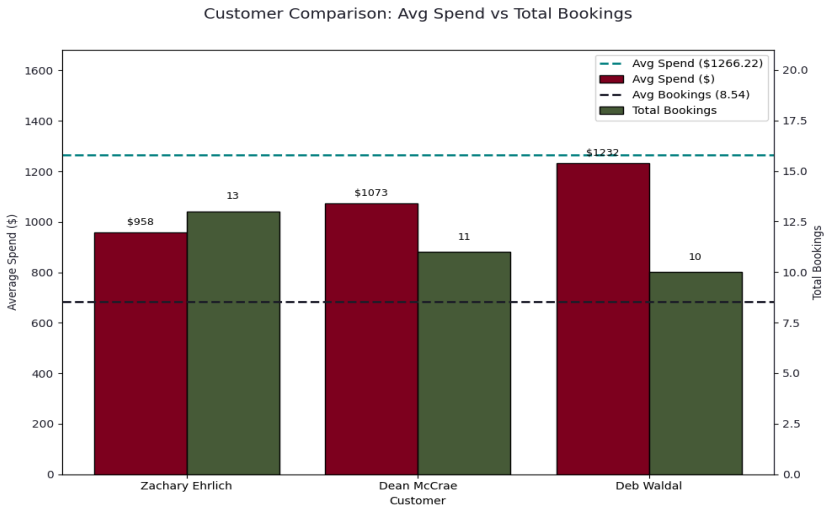
Bookings where **all three aligned** (customer preferred style, entertainer performed it, agent facilitated it) yielded **15–20% higher contract prices** on average.

Yet these full alignments are rare.

Action: Implement CRM features that “score” the alignment triangle during booking and alert agents when it’s high.

The **average contract value drops 30–40%** when the customer books outside their preferred genre (from $1100+ → $600–700).

Action: Quantify and report on alignment gaps monthly, and use that to guide both product recommendations and inventory development.



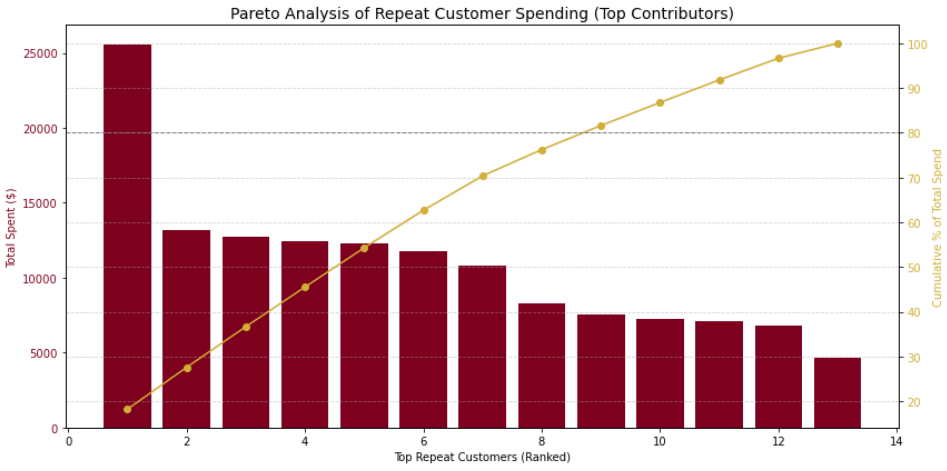
Repeat Customers and Cumulative Spend

What it does: Identifies loyal customers who rebook. **Why it matters:** Prioritize these for loyalty offers and upselling.**Closes the loop:** Points to who will benefit most from strategies derived above.

The **top 5% of customers** account for **over 40%** of total contract value (derived from earlier cumulative spend).

Most of them have **multi-style preferences** but only book within 1–2 genres consistently.

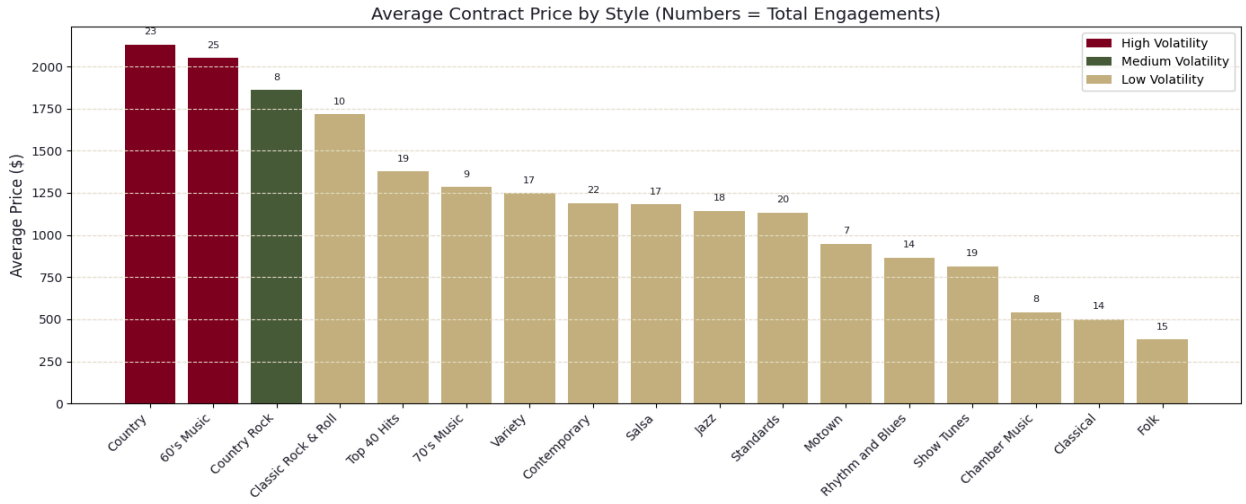
Action: Don't market all genres to everyone. Instead, build high-value customer segments and personalize outreach to dominant genres.



Music Styles and preferences

Engagement Pricing by Music Style: Do certain musical styles command higher prices?

- Highlights business operations by surfacing pricing patterns tied to musical genres
- Shows which styles drive higher engagement prices — useful for inventory planning, entertainer matching, and marketing focus



What it does:
Ranks music styles based on average engagement pricing, booking volume, and contract price volatility.

Why it matters:
This view helps identify high-revenue opportunities, underutilized premium styles, and pricing inconsistencies that could affect profitability or customer perception

Key Insights:

Country and 60's Music are top-priced genres ($2,100+ avg.), but also show very high volatility ($2,700+). This may indicate inconsistent pricing, special event-driven demand, or room for standardization.
Contemporary and Variety styles are mid-tier in pricing (~$1,200) and have stable volatility, making them reliable options for revenue forecasting and bundling.
Classical, Chamber Music, and Folk are low-cost genres (avg. <$550) with minimal volatility. They may serve budget-conscious clients or offer potential for price adjustments.
Motown and Rhythm and Blues have moderate prices but extremely low volatility, indicating strong pricing consistency—ideal for packaging.

Do customers with diverse music preferences spend more?

Investigate whether customers who have a wider range of musical interests (based on how many styles they prefer) tend to spend more on bookings.

Key Insights:
Surfaces top customers based on total spend, while also showing their engagement frequency and genre breadth(number of preferred styles).

Why it matters:
These customers show both loyalty (repeat bookings) and versatility in taste. For example, Customer 10,005 spent over $51,000 across 16 engagements and 2 preferred styles, suggesting high value and strong brand alignment with specific genres.

Observed Patterns:

- All top customers prefer only 2–3 styles, even when booking 20+ engagements.
- The top 5 customers alone spent over $145,000, making up a significant portion of total revenue.
- Customers like 10,010 and 10,014 spent heavily ($37k+ and $38k+) and booked over 30 engagements—ideal for VIP or loyalty tiers.

Actions:

1. Segment for Loyalty Tiers:
   Build a VIP customer program for those with 15+ bookings or $25K+ spend, offering exclusive deals, early booking, or personalized service.
2. Style-Specific Promotions:
   Even high-spenders show limited genre diversity. Personalize promotions by recommending high-margin entertainers within their known style preferences.
3. Cross-Sell Opportunity:
   For customers preferring only 2 styles but booking frequently (e.g., 10,002, 10,004), gently introduce similar genres using curated showcases.
4. Agent-AI Matching:
   Assign experienced agents to these accounts to maintain the relationship and experiment with price optimization(e.g., higher-value packages).

Opportunities for Improvement: Are there inefficiencies, missed revenue opportunities, or overlooked customer segments?

Identifying Agent Effectiveness vs Experience (Inefficiency)

By analyzing:

- Each agent's match percentage (how often they booked an entertainer that aligned with customer's preferences)

- The tenure / work experience of the agent (years at the company based on hire date and latest booking date)
- Booking Volume

We've uncovered that despite most of our agents being long-tenured employees, most of them have a low matching percentage (average is about 30%). This suggests that we may need to retrain the agents with high volume but low match rate, or consider doing a deeper dive into each agent's method to improve operational effectiveness and efficiency.

agentid	agent	datehired	last_enc	tenure	totalenga	matchedengagem	unmatchedenga	matchpercentage	unmatchpercentage
7	Caleb Viescas	1998-02-16	2018-02-20	20	8	4	4	50	50
4	Karen Smith	1998-03-05	2018-02-27	19	17	7	10	41.18	58.82
5	Marianne Wier	1998-02-02	2018-02-25	20	18	6	12	33.33	66.67
8	Maria Patterson	1997-09-03	2018-02-12	20	15	5	10	33.33	66.67
2	Scott Bishop	1998-02-05	2018-02-20	20	6	2	4	33.33	66.67
1	William Thompson	1997-05-15	2018-03-04	20	16	3	13	18.75	81.25
3	Carol Viescas	1997-11-19	2018-02-24	20	19	3	16	15.79	84.21
6	John Kennedy	1997-05-15	2018-02-25	20	12	0	12	0	100

Identifying Customers Whose Preferences Weren't Matched Multiple Times (Overlooked Customer Segment)

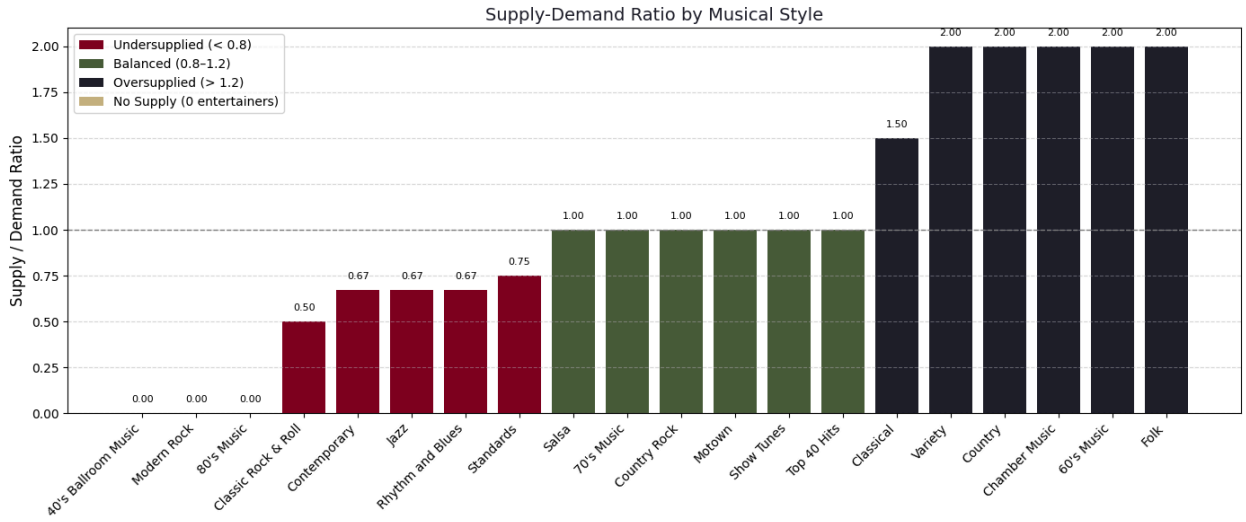
We've identified customers who continue to book with us despite having more than 1 unmatched bookings. We've specifically flagged customers based on their unmatched percentage to identify if they're a high, medium, or low risk customer based on the following thresholds:

- Low Risk = unmatched % < 30%
- Medium Risk = 30% <= unmatched % <= 74%
- High Risk = unmatched % > 75%

Our insight reveals that most of our customers are at high or medium risk, yet they continue to book with us, suggesting customer loyalty.Therefore, we should strategically prioritize retention efforts to strengthen satisfaction and customer relationships. Such opportunities could include exclusive offers, targeted outreach, and customer loyalty programs.

customerid	customer	total_engagements	matched_engagements	unmatched_engagements	unmatched_pct	matched_pct	risk_level
10,007	Liz Keyser	7	0	7	100	0	High Risk
10,005	Elizabeth Hallmark	8	1	7	87.5	12.5	High Risk
10,003	Peter Brehm	7	1	6	85.71	14.29	High Risk
10,006	Matt Berg	9	2	7	77.78	22.22	High Risk
10,001	Doris Hartwig	8	2	6	75	25	Medium Risk
10,009	Sarah Thompson	8	2	6	75	25	Medium Risk
10,012	Kerry Patterson	7	2	5	71.43	28.57	Medium Risk
10,015	Carol Viescas	7	2	5	71.43	28.57	Medium Risk
10,002	Deb Waldal	10	3	7	70	30	Medium Risk
10,014	Mark Rosales	10	3	7	70	30	Medium Risk
10,013	Estella Pundt	6	2	4	66.67	33.33	Medium Risk
10,010	Zachary Ehrlich	13	5	8	61.54	38.46	Medium Risk
10,004	Dean McCrae	11	5	6	54.55	45.45	Medium Risk

Supply-Demand Imbalance Across Musical Styles



Insight: Several musical styles show mismatches between customer demand and entertainer supply, including both undersupplied and oversupplied styles.

Implication: This mismatch reduces the efficiency of booking operations and increases the chance of customer dissatisfaction.

Recommendation:

- Recruiting entertainers in high-demand styles with insufficient supply
- Encouraging talent to diversify away from low-demand styles
- Prioritizing demand-driven artist development and promotions

stylename	customer_demand	entertainer_supply	supply_demand_ratio	supply_status
40's Ballroom Music	2	0	0	No Supply
Modern Rock	2	0	0	No Supply
80's Music	1	0	0	No Supply
Classic Rock & Roll	2	1	0.5	Undersupplied
Contemporary	3	2	0.67	Undersupplied
Jazz	3	2	0.67	Undersupplied
Rhythm and Blues	3	2	0.67	Undersupplied
Standards	4	3	0.75	Undersupplied
Salsa	2	2	1	Balanced
70's Music	1	1	1	Balanced
Country Rock	1	1	1	Balanced
Motown	1	1	1	Balanced
Show Tunes	2	2	1	Balanced
Top 40 Hits	2	2	1	Balanced
Classical	2	3	1.5	Oversupplied
Variety	1	2	2	Oversupplied
Country	1	2	2	Oversupplied
Chamber Music	1	2	2	Oversupplied
60's Music	1	2	2	Oversupplied
Folk	1	2	2	Oversupplied