

# BrightTV Case Study

## Workflows & Scripts

### Snowflake:

#### 1) Convert UTC to SA time (add 2 hours) (TO\_TIMESTAMP)

```
1  --Convert timezone to UTC+2
2  SELECT
3      UserID,
4      Channel2,
5      RecordDate2,
6      TO_TIMESTAMP(RecordDate2, 'YYYY/MM/DD HH24:MI') + INTERVAL '2 hour' AS SA_RecordDate
7  FROM Viewership;
```

	# USERID	A CHANNEL2	A RECORDDATE2	🕒 SA_RECORDDATE
1	903994	Trace TV	2016/01/04 18:09	2016-01-04 20:09:00.000
2	802352	ICC Cricket World Cup 2011	2016/03/30 09:04	2016-03-30 11:04:00.000
3	866125	ICC Cricket World Cup 2011	2016/03/30 17:01	2016-03-30 19:01:00.000
4	2425604	ICC Cricket World Cup 2011	2016/03/25 15:23	2016-03-25 17:23:00.000
5	793571	SawSee	2016/02/02 17:18	2016-02-02 19:18:00.000

#### 2) Join Viewership with UserProfiles (TO\_TIMESTAMP & JOIN)

```
9  --Join Viewership with UserProfiles
10 SELECT
11     v.UserID,
12     u.Gender,
13     u.Age,
14     u.Province,
15     v.Channel2,
16     TO_TIMESTAMP(RecordDate2, 'YYYY/MM/DD HH24:MI') + INTERVAL '2 hour' AS SA_RecordDate
17 FROM Viewership v
18 JOIN USER_PROFILES u ON v.UserID = u.UserID;
```

	# USERID	A GENDER	# AGE	A PROVINCE	A CHANNEL2	🕒 SA_RECORDDATE
1	903994	male	33	Western Cape	Trace TV	2016-01-04 20:09:00.000
2	802352	None	0	None	ICC Cricket World Cup 2	2016-03-30 11:04:00.000
3	866125	male	30	Gauteng	ICC Cricket World Cup 2	2016-03-30 19:01:00.000
4	2425604	female	51	Gauteng	ICC Cricket World Cup 2	2016-03-25 17:23:00.000
5	793571	female	9	Eastern Cape	SawSee	2016-02-02 19:18:00.000

#### 3) Find the Most Watched Days (DAYNAME, COUNT, GROUP BY & ORDER BY)

```

21
22 --Find the Most Watched Days
23 SELECT
24     DAYNAME(TO_TIMESTAMP(RecordDate2, 'YYYY/MM/DD HH24:MI') + INTERVAL '2 hour') AS DayOfWeek,
25     COUNT(*) AS TotalViews
26 FROM Viewership
27 GROUP BY DayOfWeek
28 ORDER BY TotalViews DESC;

```

	DAYOFWEEK	TOTALVIEWS
1	Fri	1675
2	Sat	1633
3	Wed	1553
4	Thu	1441
5	Sun	1419

#### 4) Check Which Gender Watches the Most (COUNT, JOIN, GROUP BY & ORDER BY)

```

29
30 --See which Gender watched the Most
31 SELECT
32     u.Gender,
33     COUNT(*) AS TotalViews
34 FROM Viewership v
35 JOIN USER_PROFILES u
36     ON v.UserID = u.UserID
37 GROUP BY u.Gender
38 ORDER BY TotalViews DESC;

```

	GENDER	TOTALVIEWS
1	male	8761
2	female	977
3	None	262

#### 5) Find the Most Popular Channel (GROUP BY & ORDER BY)

```

40 --Find the Most Popular Channel
41 SELECT
42     Channel2,
43     COUNT(*) AS Most_Views
44 FROM Viewership
45 GROUP BY Channel2
46 ORDER BY Most_Views DESC;
47

```

	CHANNEL2	MOST_VIEWS
1	Supersport Live Events	1638
2	ICC Cricket World Cup 2011	1465
3	Channel O	1050
4	Trace TV	952
5	SuperSport Blitz	896

#### 6) What Content is Watched Each Day (GROUP BY & ORDER BY)

```

48  --What Content is Watched Each Day
49  SELECT
50      DAYNAME(TO_TIMESTAMP(RecordDate2, 'YYYY/MM/DD HH24:MI') + INTERVAL '2 hour') AS DayOfWeek,
51      Channel2,
52      COUNT(*) AS Most_Views
53  FROM Viewership
54  GROUP BY DayOfWeek, Channel2
55  ORDER BY DayOfWeek, Most_Views DESC;
56

```

	DAYOFWEEK	CHANNEL2	MOST_VIEWS
1	Fri	Supersport Live Events	408
2	Fri	ICC Cricket World Cup 2011	205
3	Fri	Channel O	180
4	Fri	Africa Magic	137
5	Fri	Trace TV	129

## 7) Viewership by Age (CASE Statement)

```

--Viewership by Age
SELECT v.Channel2,
CASE
    WHEN u.Age < 20 THEN 'Under 20'
    WHEN u.Age BETWEEN 20 AND 29 THEN '20-29'
    WHEN u.Age BETWEEN 30 AND 39 THEN '30-39'
    WHEN u.Age BETWEEN 40 AND 49 THEN '40-49'
    WHEN u.Age BETWEEN 50 AND 59 THEN '50-59'
    ELSE '60+'
END AS Age_Bracket,
FROM Viewership v
JOIN USER_PROFILES u ON v.UserID = u.UserID
GROUP BY Age_Bracket, v.Channel2
ORDER BY Age_Bracket;

```

	CHANNEL2	AGE_BRACKET
1	Supersport Live Events	20-29
2	M-Net	20-29
3	Channel O	20-29
4	ICC Cricket World Cup 2011	20-29
5	Cartoon Network	20-29

## Excel:

### 1) Add South African Time (UTC+2) Column



**SA\_Time(UTC+2)**

**Formula:** C2+TIME(2;0;0)

### 2) Add Day of the Week



**Day of Week**

**Formula:** TEXT(C2; "dddd")

### 3) Format Gender values



#### Gender

**Formula:** PROPER(E)

### 4) Format Race values



#### Race

**Formula:** PROPER(F)

### 5) Added Time of Day Column (IF Statements)



#### Time of Day

**Formula:** IF(HOUR(E2)>=5; IF(HOUR(E2)<12; "Morning"; IF(HOUR(E2)<18; "Afternoon"; "Evening")); "Evening")

### 6) Add Watching Duration Column



#### Watching Duration

**Formula:** IF(HOUR(D2)>0; HOUR(D2)&" hour(s) "&MINUTE(D2)&" minute(s)"; IF(MINUTE(D2)>0; MINUTE(D2)&" minute(s)";SECOND(D2)&" second(s)"))

### 7) Add Age Brackets Column



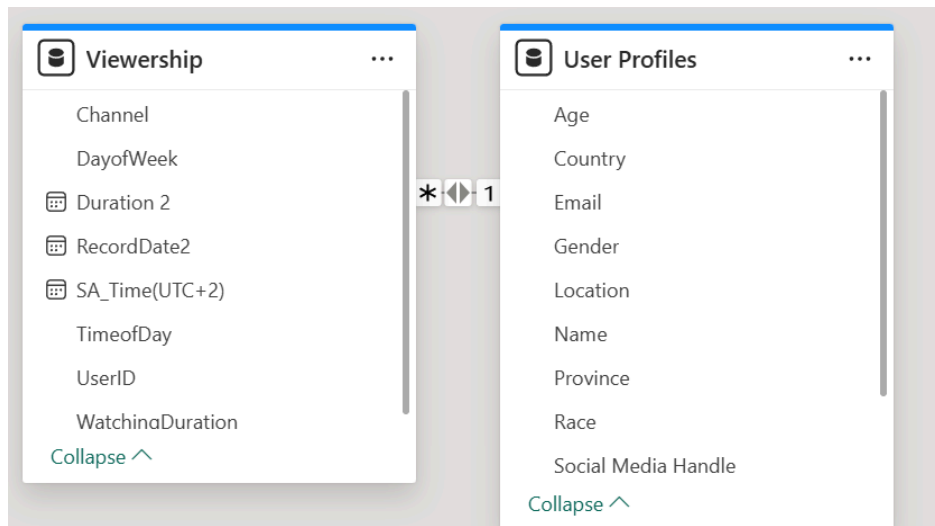
#### Age Brackets

**Formula:** IF(G2<20; "Under 20"; IF(G2<30; "20-29"; IF(G2<40; "30-39"; IF(G2<50; "40-49"; IF(G2<60; "50-59"; "60+")))))

## PowerBI:

### 1) Upload the clean Excel sheet

### 2) Create Relationship using UserID



### 3) Create Visuals (Total Views by Day, Views by Gender, Top 5 Channels, Views by Province, Views by Hour, Views by Age Group)

