**USE CASES:**

1.

**Use Case:**Search for Data Science Jobs in MLS

**Description:**User wants to find job posts on twitter for Major League Soccer

**Actors:**User

**Precondition:**User must have access to the database

**Actor action –**User queries for keywords or tweets that contain ‘MLS’

**System Responses –**tweets/postings with MLS in the keywords or tweet\_contents are displayed

2.

**Use Case:**Add an NBA listing for Sales Manager

**Description:**User wants to post a job description on twitter for an NBA team looking for a Sales Manager

**Actors:**User

**Precondition:**User must have a twitter account

**Actor action –**User tweets out a job description with or without a link

**System Responses –**tweet is inserted into the database when NBA Jobs is triggered

3.

**Use Case:**Search for which league/keyword has the most postings available

**Description:**User wants to find out which league/keyword is easiest to find using twitter

**Actors:**User

**Precondition:**User must have access to the database

**Actor action –**User queries for a count of all unique tweets by keyword from highest to lowest

**System Responses –**each keyword and a count of all unique tweets is displayed ordered by counts descending

4.

**Use Case:**Tweet about a posting for an MLB Scouting position

**Description:**User wants to post a job description on twitter for an MLB team searching for a talent scout

**Actors:**User

**Precondition:**User must have a twitter account

**Actor action –**User tweets out a job description with or without a link

**System Responses –**tweet is inserted into the database when MLB Jobs, resume etc are triggered

5.

**Use Case:**Search for mentions of the Arizona Cardinals in job tweets

**Description:**User wants to find mentions of the Arizona Cardinals in database

**Actors:**User

**Precondition:**User must have access to the database and knowledge of the Cardinals Twitter User Name

**Actor action –**User queries for all tweets with mentioned user being ‘AZCards’

**System Responses –**A list of all tweets with ‘AZCards’ as a mentioned\_user are displayed

**RELATIONAL ALGEBRA FOR USE CASES:**

**1.**

(σ{keywords LIKE '%MLS%' }(Tweets))

**3.**

Π{Keywords, count(tweet\_ID)}(Tweets))

**5.**

Π{t.tweet\_ID,t.tweet\_contents, m.mentioned\_user}(σ{m.mentioned\_user = ‘AZCards’}(ρ{m}(Tweet.Mentions)  ×  ρ{t}(Tweets)))

**SQL FOR USE CASES:**

**1.**

**SELECT \***

**FROM Tweets**

**WHERE keywords LIKE ‘%MLS%’ OR tweet\_contents LIKE ‘%MLS’**

**2.**

**INSERT INTO Tweets (tweet\_ID, tweet\_user\_ID, tweet\_contents, tweet\_location, tweet\_rt\_count, tweet\_fav\_count, tweet\_urls, source\_identifier)**

**VALUES (172727374, 5167462, “The Boston Celtics are searching for a new sales manager. Must have 5 years sales experience. Please send resumes or any queries to the email in my bio or visit this link ‘THISisAfakeLINKBC.org’ ”, “Boston, MA”, 0, 0, ‘THISisAfakeLINKBC.org’, 1)**

**3.**

**SELECT keywords, count(Distinct tweet\_ID) as keyword\_frequency**

**FROM Tweets**

**GROUP BY keywords**

**ORDER BY keyword\_frequency DESC**

**4.**

**INSERT INTO Tweets (tweet\_ID, tweet\_user\_ID, tweet\_contents, tweet\_location, tweet\_rt\_count, tweet\_fav\_count, source\_identifier)**

**VALUES (8378543, 10078934, “The Tampa Bay Rays are searching for an experienced MLB Talent Scout. Please DM me if interested and email me resumes after following up. Go RAYS!!! #MLBJOBS #STINGRAYSSTING”, “Orlando, FL”, 1, 5, 1)**

**5.**

**SELECT t.tweet\_ID, t.tweet\_Contents, m.mentioned\_user**

**FROM Tweets t**

**JOIN Tweet\_Mentions m**

**ON m.source\_tweet\_ID == t.tweet\_ID**

**WHERE m.mentioned\_user == ‘AZCards’**