NFL Team Spread & Performance Data Preparation

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Problem Proposal

What attributes impact spread predictions, and performances of teams in the NFL?

Understanding Spreads

CAESARS
ATLANTIC CITY

Initial Dataset

Kaggle

3 main entities

NFL Teams
- Team Name, conference, division

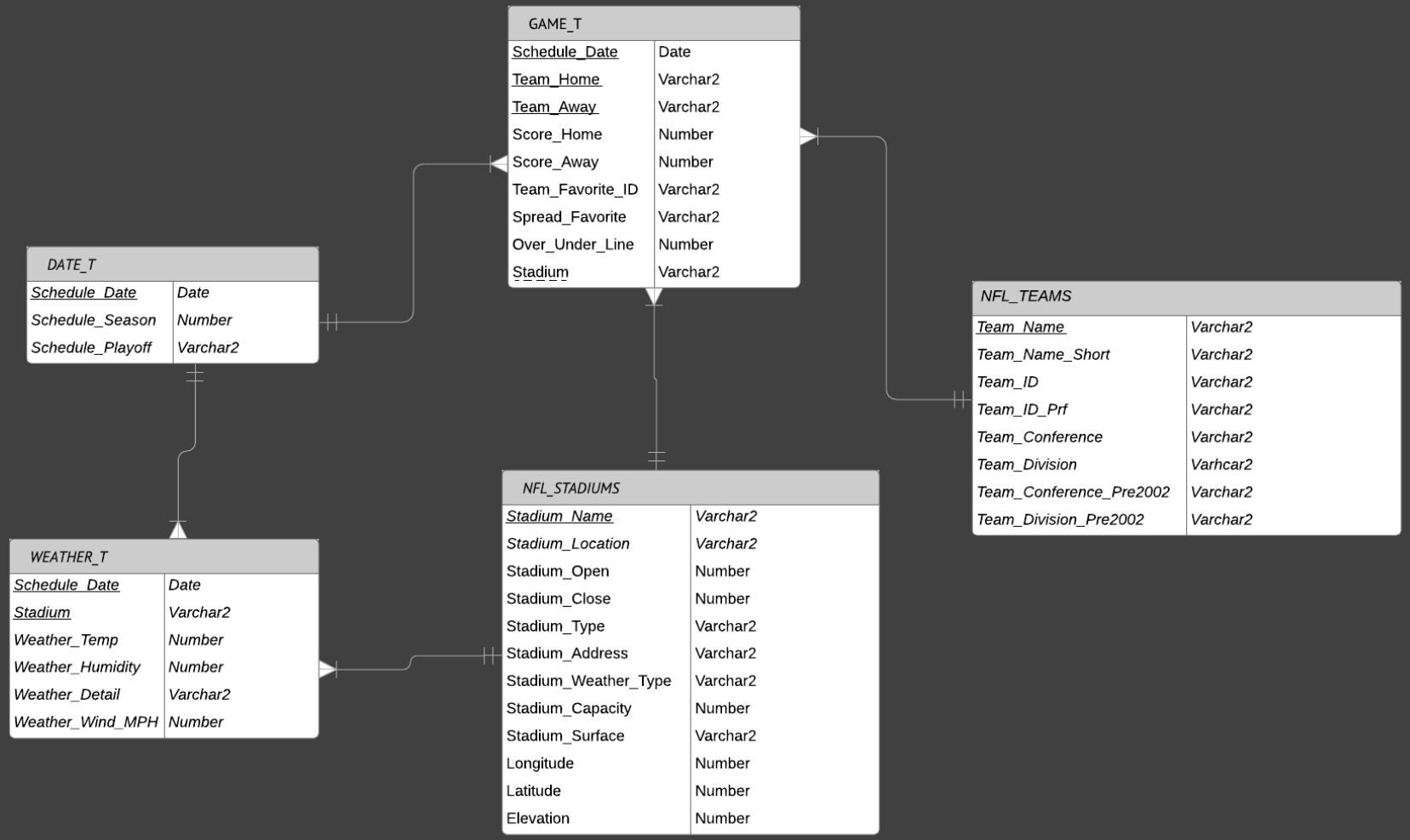
NFL Stadiums
- Stadium name, location, type, elevation, surface

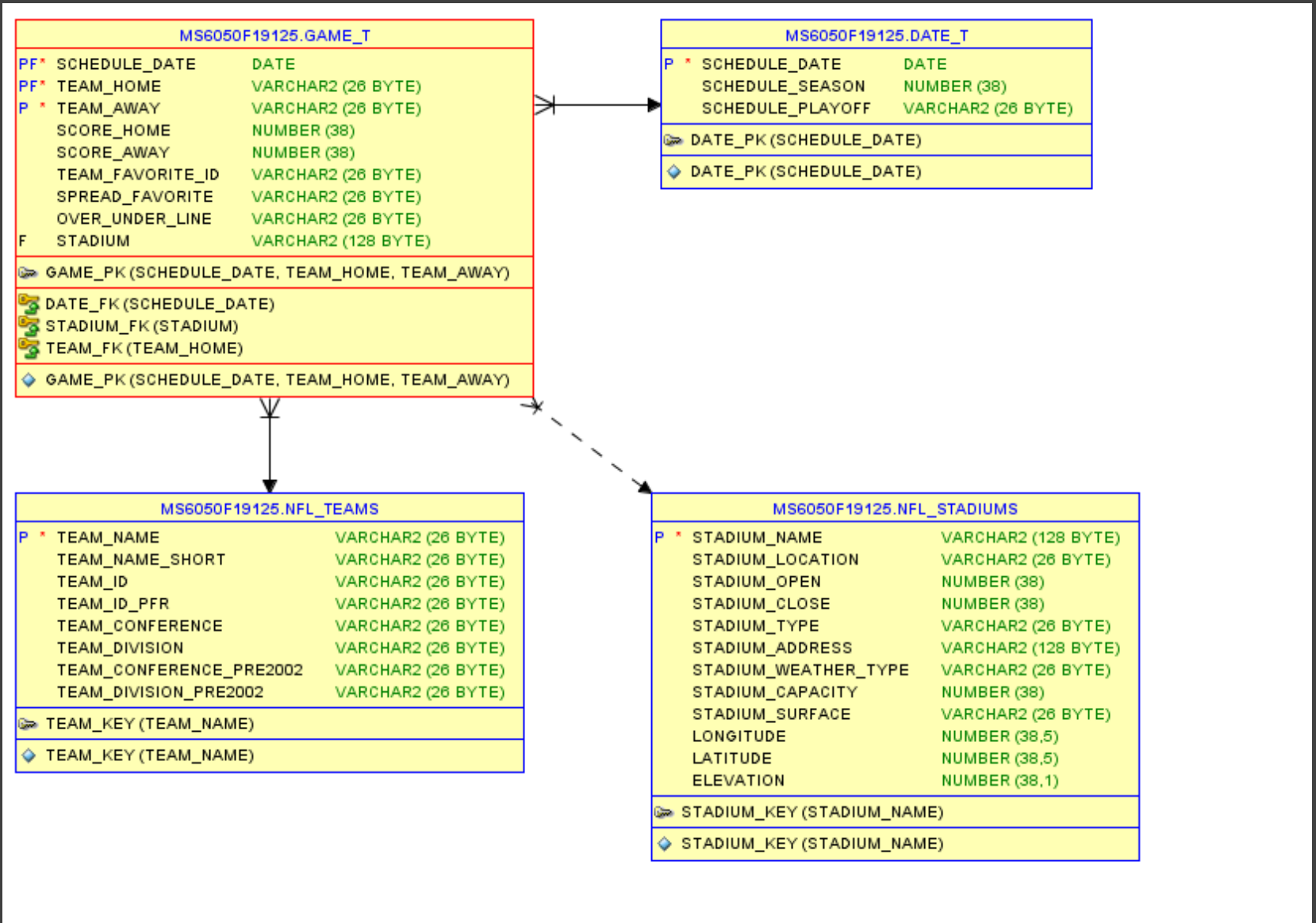
Spreadspoke Gambling Data
- Date of Game, home/away team, score, spread, weather

Through normalization, split into 5 main entities

Football Data Mgmt ER Diagram

Elliott Newman | December 1, 2019

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PF* SCHEDULE_DATE DATE
PF* TEAM_HOME VARCHAR2 (26 BYTE)
P * TEAM_AWAY VARCHAR2 (26 BYTE)
SCORE_HOME NUMBER (38)
SCORE_AWAY NUMBER (38)
TEAM_FAVORITE_ID VARCHAR2 (26 BYTE)
SPREAD_FAVORITE VARCHAR2 (26 BYTE)
OVER_UNDER_LINE VARCHAR2 (26 BYTE)
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DATE_FK (SCHEDULE_DATE)
STADIUM_FK (STADIUM)
TEAM_FK (TEAM_HOME)
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MS6050F19125.DATE_T
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DATE_PK (SCHEDULE_DATE)
DATE_PK (SCHEDULE_DATE)
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TEAM_ID VARCHAR2 (26 BYTE)
TEAM_ID_PFR VARCHAR2 (26 BYTE)
TEAM_CONFERENCE VARCHAR2 (26 BYTE)
TEAM_DIVISION VARCHAR2 (26 BYTE)
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STADIUM_CLOSE NUMBER (38)
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STADIUM_SURFACE VARCHAR2 (26 BYTE)
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LATITUDE NUMBER (38,5)
ELEVATION NUMBER (38,1)
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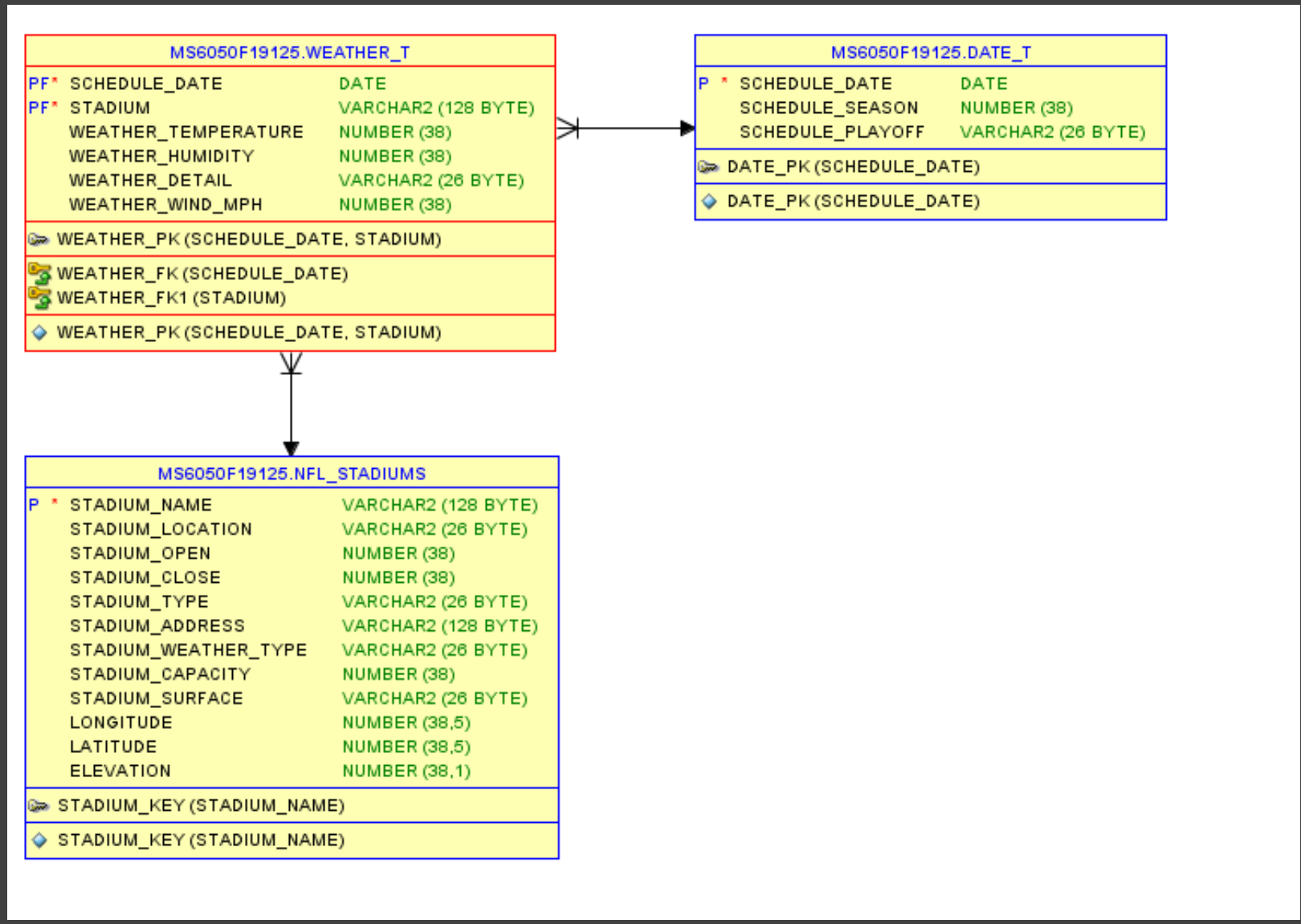
STADIUM_KEY (STADIUM_NAME)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MS6050F19125.DATE_T
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SCHEDULE_SEASON NUMBER (38)
SCHEDULE_PLAYOFF VARCHAR2 (26 BYTE)
DATE_PK (SCHEDULE_DATE)
DATE_PK (SCHEDULE_DATE)
MS6050F19125.NFL_STADIUMS
P * STADIUM_NAME VARCHAR2 (128 BYTE)
STADIUM_LOCATION VARCHAR2 (26 BYTE)
STADIUM_OPEN NUMBER (38)
STADIUM_CLOSE NUMBER (38)
STADIUM_TYPE VARCHAR2 (26 BYTE)
STADIUM_ADDRESS VARCHAR2 (128 BYTE)
STADIUM_WEATHER_TYPE VARCHAR2 (26 BYTE)
STADIUM_CAPACITY NUMBER (38)
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LONGITUDE NUMBER (38,5)
LATITUDE NUMBER (38,5)
ELEVATION NUMBER (38,1)
STADIUM_KEY (STADIUM_NAME)
STADIUM_KEY (STADIUM_NAME)

Data Preparation

Removed invalid data

Removed unnecessary attributes

Updated any incorrect measurements to correct measurements

Created new attributes using SQL ‘CASE’ statements