**Unit Tests Written –**

1. **Null parameters return null**
2. **Non-null parameters return not null**

**Unit Tests Needed –**

**HomeTeam – Returns passed-in value**

**AwayTeam - Returns passed-in value**

**Week - Returns passed-in value**

**Season - Returns passed-in value**

**HomeScore - Returns passed-in value**

**AwayScore - Returns passed-in value**

**Result - Returns passed-in value**

**HomeAvgPointsFor - Returns passed-in value**

**HomeAvgPointsAgainst - Returns passed-in value**

**HomeAvgOff1stD - Returns passed-in value**

**HomeAvgOffTotYd - Returns passed-in value**

**HomeAvgOffPassYd - Returns passed-in value**

**HomeAvgOffRushYd - Returns passed-in value**

**HomeAvgOffTO - Returns passed-in value**

**HomeAvgDef1stD - Returns passed-in value**

**HomeAvgDefTotYd - Returns passed-in value**

**HomeAvgDefPassYd -** **Returns passed-in value**

**HomeAvgDefRushYd - Returns passed-in value**

**HomeAvgDefTO - Returns passed-in value**

**HomeAvgExPointsOff - Returns passed-in value**

**HomeAvgExPointsDef - Returns passed-in value**

**HomeAvgExPointsSpecial - Returns passed-in value**

**HomeLastPointsFor - Returns passed-in value**

**HomeLastPointsAgainst - Returns passed-in value**

**HomeLastOff1stD - Returns passed-in value**

**HomeLastOffTotYd - Returns passed-in value**

**HomeLastOffPassYd - Returns passed-in value**

**HomeLastOffRushYd - Returns passed-in value**

**HomeLastOffTO - Returns passed-in value**

**HomeLastDef1stD - Returns passed-in value**

**HomeLastDefTotYd - Returns passed-in value**

**HomeLastDefPassYd - Returns passed-in value**

**HomeLastDefRushYd - Returns passed-in value**

**HomeLastDefTO - Returns passed-in value**

**HomeLastExPointsOff -** **Returns passed-in value**

**HomeLastExPointsDef -** **Returns passed-in value**

**HomeLastExPointsSpecial - Returns passed-in value**

**AwayAvgPointsFor - Returns passed-in value**

**AwayAvgPointsAgainst - Returns passed-in value**

**AwayAvgOff1stD -** **Returns passed-in value**

**AwayAvgOffTotYd - Returns passed-in value**

**AwayAvgOffPassYd - Returns passed-in value**

**AwayAvgOffRushYd - Returns passed-in value**

**AwayAvgOffTO - Returns passed-in value**

**AwayAvgDef1stD - Returns passed-in value**

**AwayAvgDefTotYd - Returns passed-in value**

**AwayAvgDefPassYd - Returns passed-in value**

**AwayAvgDefRushYd - Returns passed-in value**

**AwayAvgDefTO - Returns passed-in value**

**AwayAvgExPointsOff - Returns passed-in value**

**AwayAvgExPointsDef - Returns passed-in value**

**AwayAvgExPointsSpecial - Returns passed-in value**

**AwayLastPointsFor - Returns passed-in value**

**AwayLastPointsAgainst - Returns passed-in value**

**AwayLastOff1stD - Returns passed-in value**

**AwayLastOffTotYd - Returns passed-in value**

**AwayLastOffPassYd - Returns passed-in value**

**AwayLastOffRushYd - Returns passed-in value**

**AwayLastOffTO - Returns passed-in value**

**AwayLastDef1stD - Returns passed-in value**

**AwayLastDefTotYd - Returns passed-in value**

**AwayLastDefPassYd - Returns passed-in value**

**AwayLastDefRushYd - Returns passed-in value**

**AwayLastDefTO - Returns passed-in value**

**AwayLastExPointsOff - Returns passed-in value**

**AwayLastExPointsDef - Returns passed-in value**

**AwayLastExPointsSpecial - Returns passed-in value**

**HomeOddsOpen - Returns passed-in value**

**HomeOddsMin - Returns passed-in value**

**HomeOddsMax - Returns passed-in value**

**HomeOddsClose – Returns Max, Min, or Open if null passed in**

* **Returns passed in value if not null**

**HomeOddsCloseIP – equal to 1/HomeOddsClose**

* **Equal to 1/HomeOddsopen | HomeOddsMax | HomeOddsMin**

**HomeOddsCloseDevig – Equal to HomeOddsCloseIP / HomeOddsCloseIP + AwayOddsCloseIP assuming none are null**

**AwayOddsOpen - Returns passed-in value**

**AwayOddsMin - Returns passed-in value**

**AwayOddsMax - Returns passed-in value**

**AwayOddsClose - Returns Max, Min, or Open if null passed in**

**- Returns passed in value if not null**

**AwayOddsCloseIP - equal to 1/AwayOddsClose**

**- Equal to 1/AwayOddsOpen | AwayOddsMax | AwayOddsMin**

**AwayOddsCloseDevig – Equal to AwayOddsCloseIP / AwayOddsCloseIP + HomeOddsCloseIP assuming none are null**

**HomeLineOpen - Returns passed-in value**

**HomeLineMin - Returns passed-in value**

**HomeLineMax - Returns passed-in value**

**HomeLineClose – Returns Max, Min, or Open if null passed in**

* **Returns passed in value if not null**

**AwayLineOpen - Returns passed-in value**

**AwayLineMin - Returns passed-in value**

**AwayLineMax - Returns passed-in value**

**AwayLineClose – Returns Max, Min or Open if null passed in**

* **Returns passed in value if not null**

**HomeLineOddsOpen - Returns passed-in value**

**HomeLineOddsMin - Returns passed-in value**

**HomeLineOddsMax - Returns passed-in value**

**HomeLineOddsClose – Returns Max, Min or Open if null passed in**

* **Returns passed in value if not null**

**HomeLineOddsCloseIP – equal to 1/HomeLineOddsClose**

**- Equal to 1/HomeLineOddsOpen | HomeLineOddsMax | HomeLineOddsMin**

**HomeLineOddsCloseDevig – equal to HomeLineOddsCloseIP / HomeLineOddsCloseIP + AwayLineOddsCloseIP**

**AwayLineOddsOpen – Returns passed-in value**

**AwayLineOddsMin - Returns passed-in value**

**AwayLineOddsMax - Returns passed-in value**

**AwayLineOddsClose - Returns Max, Min or Open if null passed in**

**- Returns passed in value if not null**

**AwayLineOddsCloseIP – equal to 1/AwayLineOddsClose**

**- Equal to 1/HomeLineOddsOpen | HomeLineOddsMax | HomeLineOddsMin**

**AwayLineOddsCloseDevig - equal to AwayLineOddsCloseIP / AwayLineOddsCloseIP + HomeLineOddsCloseIP**

**TotalScoreOpen – Returns passed-in value**

**TotalScoreMin - Returns passed-in value**

**TotalScoreMax - Returns passed-in value**

**TotalScoreClose - Returns Max, Min or Open if null passed in**

**- Returns passed in value if not null**

**TotalScoreOverOpen - Returns passed-in value**

**TotalScoreOverMin - Returns passed-in value**

**TotalScoreOverMax - Returns passed-in value**

**TotalScoreOverClose - Returns Max, Min or Open if null passed in**

**- Returns passed in value if not null**

**TotalScoreOverCloseIP - equal to 1/TotalScoreOverClose**

**- Equal to 1/TotalScoreOverOpen | TotalScoreOverMax | TotalScoreOverMin**

**TotalScoreOverCloseDevig - equal to TotalScoreOverCloseIP / TotalScoreOverCloseIP + TotalScoreUnderCloseIP**

**TotalScoreUnderOpen - Returns passed-in value**

**TotalScoreUnderMin - Returns passed-in value**

**TotalScoreUnderMax - Returns passed-in value**

**TotalScoreUnderClose - Returns Max, Min or Open if null passed in**

**- Returns passed in value if not null**

**TotalScoreUnderCloseIP - equal to 1/TotalScoreUnderClose**

**- Equal to 1/TotalScoreUnderOpen | TotalScoreUnderMax | TotalScoreUnderMin**

**TotalScoreUnderCloseDevig - equal to TotalScoreUnderCloseIP / TotalScoreUnderCloseIP + TotalScoreOverCloseIP**

**HomeLineMovement – returns sum of HomeLineMax (or maximum between open/close) – HomeLineMin (or minimum between open/close)**

**HomeLineOddsMovement - returns sum of HomeLineOddsMax (or maximum between open/close) – HomeLineOddsMin (or minimum between open/close)**

**AwayLineMovement - returns sum of AwayLineMax (or maximum between open/close) –AwayLineMin (or minimum between open/close)**

**AwayLineOddsMovement - returns sum of AwayLineOddsMax (or maximum between open/close) –AwayLineOddsMin (or minimum between open/close)**

**TotalScoreMovement - returns sum of TotalScoreMax (or maximum between open/close) –TotalScoreMin (or minimum between open/close)**

**TotalScoreOverMovement - returns sum of TotalScoreOverMax (or maximum between open/close) – TotalScoreOverMin (or minimum between open/close)**

**TotalScoreUnderMovement - returns sum of TotalScoreUnderMax (or maximum between open/close) – TotalScoreUnderMin (or minimum between open/close)**

**ImpliedProbabilityOutrightPick (need to rewrite this whole section of code)–**

1. **If in agreement, pick based on criteria**
2. **If in disagreement, pick based Fav or Home (if even odds)**
3. **If FavDog is null, pick based on HomeAway**
4. **If HomeAway is null, pick based on FavDog**
5. **If both are null, pick favorite (this shouldn’t be hit I think)**

**ImpliedProbabilityOutrightPickHomeAway**

1. **If HomeOddsCloseDevig > HomeOddsThreshold and AwayOddsCloseDevig < AwayOddsThreshold, pick Home**
2. **If HomeOddsCloseDevig < HomeOddsThreshold and AwayOddsCloseDevig > AwayOddsThreshold, pick Away**
3. **If both are higher than their respective threshold, pick higher odds**

**ImpliedProbabilityOutrightPickFavDog**

1. **If favorite odds are higher than favorite threshold, pick favorite**
2. **If dog odds are higher than dog threshold and fav odds are lower than favorite threshold, pick dog**

**ImpliedProbabilityOutrightPickCorrect**

1. **If pick = home and result = home, then ‘Y’**
2. **If pick = away and result = away, then ‘Y’**
3. **If pick = home and result = away, then 'N’**
4. **If pick = away and result = home, then ‘N’**

**ImpliedProbabilityOutrightPickHACorrect**

1. **If pick = home and result = home, then ‘Y’**
2. **If pick = away and result = away, then ‘Y’**
3. **If pick = home and result = away, then 'N’**
4. **If pick = away and result = home, then ‘N’**

**ImpliedProbabilityOutrightPickFDCorrect**

1. **If pick = fav and fav = home and result = home, then ‘Y’**
2. **If pick = fav and fav = away and result = away, then ‘Y’**
3. **If pick = dog and fav = away and result = away, then 'N’**
4. **If pick = dog and fav = home and result = home, then ‘N’**
5. **If pick = fav and fav = away and result = away, then ‘Y’**
6. **If pick = fav and fav = home and result = home, then ‘Y’**
7. **If pick = dog and fav = home and result = home, then 'N’**
8. **If pick = dog and fav = away and result = away, then ‘N’**

**COUNTED TO HERE**

**ImpliedProbabilitySpreadPick**

1. **If SpreadPickFD = ‘Fav’ and SpreadPickHome = Home and Home is fav, then Home**
2. **If SpreadPickFD = ‘Dog’ and SpreadPickHA = Home and Away is fav, then Home**
3. **If SpreadPickFD = ‘Fav’ and SpreadPickHA = Away and Away is fav, then Away**
4. **If SpreadPickFD = ‘Dog’ and SpreadPickHA = Away and Home is Fav, then Away**
5. **If SpreadPickFD = ‘Fav’ and SpreadPickHA = Home and Away is Fav, then Away**
6. **If SpreadPickFD = ‘Dog’ and SpreadPickHA = Away and Away is Fav, then Home**

**ImpliedProbabilitySpreadPickHomeAway**

1. **If HomeLineOddsCloseDevig > SpreadPickHomeOddsThreshold, then Home**
2. **If AwayLineOddsCloseDevig > SpreadPickAwayOddsThreshold and SpreadPickHomeAway is null, then Away**

**ImpliedProbabilitySpreadPickFavDog**

1. **If fav line odds > FavoriteOddsThreshold, then Fav**
2. **If dog line odds > DogOddsThreshold and SpreadPickFavDog is null, then Dog**

**ImpliedProbabilitySpreadPickHACorrect**

1. **If SpreadPickHA = Home, and Home covered, then ‘Y’**
2. **If SpreadPickHA = Away, and Away covered, then ‘Y’**
3. **If SpreadPickHA = Home, and Away covered, then ‘N’**
4. **If SpreadPickHA = Away, and Home covered, then ‘N’**
5. **If SpreadPickHA is null, then null**

**ImpliedProbabilitySpreadPickFDCorrect**

1. **If SpreadPickFD = Fav, and Fav covered, then ‘Y’**
2. **If SpreadPickFD = Dog, and Dog covered, then ‘Y’**
3. **If SpreadPickFD = Dog, and Fav covered, then ‘N’**
4. **If SpreadPickFD = Fav, and Dog covered, then ‘N’**
5. **If SpreadPickFD is null, then null**

**ImpliedProbabilitySpreadPickCorrect**

1. **If SpreadPick = Home and Home covered, then ‘Y’**
2. **If SpreadPick = Away and away covered, then ‘Y’**
3. **If SpreadPick = Home and away covered, then ‘N’**
4. **If SpreadPick = Away and home covered, then ‘N’**

**ImpliedProbabilityTotalPick**

1. **If TotalScoreClose < (HomeAvgPointsAgainst + HomeAvgPointsFor + AwayAvgPointsFor + AwayAvgPointsAgainst)/4, then ‘Over’**
2. **If TotalScoreClose > (HomeAvgPointsAgainst + HomeAvgPointsFor + AwayAvgPointsFor + AwayAvgPointsAgainst)/4, then ‘Under’**
3. **If TotalScoreClose = (HomeAvgPointsAgainst + HomeAvgPointsFor + AwayAvgPointsFor + AwayAvgPointsAgainst)/4, then null**

**ImpliedProbabilityTotalPickCorrect**

1. **If TotalScoreClose > HomeScore + AwayScore and TotalPick = ‘Over’ then ‘Y’**
2. **If TotalScoreClose < HomeScore + AwayScore and TotalPick = ‘Under’ then ‘Y’**
3. **If TotalScoreClose > HomeScore + AwayScore and TotalPick = ‘Under’ then ‘N’**
4. **If TotalScoreClose < HomeScore + AwayScore and TotalPick = ‘Over’ then ‘N’**
5. **If TotalPick is null, then null**

**ImpliedProbabilityOutrightPickWager (need to rewrite for clarity)**

1. **If FavoriteOdds – FavoriteOddsThreshold between FavOdds \* OneUnitThreshold and FavOdds \* FiveUnitThreshold, then 1**
2. **If FavoriteOdds – FavoriteOddsThreshold between FavOdds \* FiveUnitThreshold and FavOdds \* TenUnitThreshold, then 5**
3. **If FavoriteOdds – FavoriteOddsThreshold > FavOdds \* TenUnitThreshold, then 10**
4. **If none of the above are applicable, then 0**

**ImpliedProbabilityOutrightPickHomeAwayWager**

1. **If HomeOdds – HomeOddsThreshold between HomeOdds \* OneUnitThreshold and FavOdds \* FiveUnitThreshold, then 1**
2. **If HomeOdds – HomeOddsThreshold between HomeOdds \* FiveUnitThreshold and FavOdds \* TenUnitThreshold, then 5**
3. **If HomeOdds – HomeOddsThreshold > FavOdds \* TenUnitThreshold, then 10**
4. **If none of the above are applicable, then 0**

**ImpliedProbabilityOutrightPickFavDogWager**

1. **If FavoriteOdds – FavoriteOddsThreshold between FavOdds \* OneUnitThreshold and FavOdds \* FiveUnitThreshold, then 1**
2. **If FavoriteOdds – FavoriteOddsThreshold between FavOdds \* FiveUnitThreshold and FavOdds \* TenUnitThreshold, then 5**
3. **If FavoriteOdds – FavoriteOddsThreshold > FavOdds \* TenUnitThreshold, then 10**
4. **If none of the above are applicable, then 0**

**ImpliedProbabilitySpreadPickWager**

1. **If FavoriteLineOdds – FavoriteLineOddsThreshold between FavLineOdds \* OneUnitThreshold and FavLineOdds \* FiveUnitThreshold, then 1**
2. **If FavoriteLineOdds – FavoriteLineOddsThreshold between FavLineOdds \* FiveUnitThreshold and FavLineOdds \* TenUnitThreshold, then 5**
3. **If FavoriteOdds – FavoriteLineOddsThreshold > FavLineOdds \* TenUnitThreshold, then 10**
4. **If none of the above are applicable, then 0**

**ImpliedProbabilitySpreadPickHomeAwayWager**

1. **If HomeLineOdds – HomeLineOddsThreshold between HomeLineOdds \* OneUnitThreshold and HomeLineOdds \* FiveUnitThreshold, then 1**
2. **If HomeLineOdds – HomeLineOddsThreshold between HomeLineOdds \* FiveUnitThreshold and HomeLineOdds \* TenUnitThreshold, then 5**
3. **If HomeLineOdds – HomeLineOddsThreshold > HomeLineOdds \* TenUnitThreshold, then 10**
4. **If none of the above are applicable, then 0**

**ImpliedProbabilitySpreadPickFavDogWager**

1. **If FavoriteLineOdds – FavoriteLineOddsThreshold between FavLineOdds \* OneUnitThreshold and FavLineOdds \* FiveUnitThreshold, then 1**
2. **If FavoriteLineOdds – FavoriteLineOddsThreshold between FavLineOdds \* FiveUnitThreshold and FavLineOdds \* TenUnitThreshold, then 5**
3. **If FavoriteLineOdds – FavoriteLineOddsThreshold > FavLineOdds \* TenUnitThreshold, then 10**
4. **If none of the above are applicable, then 0**

**ImpliedProbabilityTotalPickWager**

1. **If TotalPick = Over and OverCloseDevig – OverOddsThreshold between OverCloseDevig \* OneUnitThreshold and OverCloseDevig \* FiveUnitThreshold, then 1**
2. **If TotalPick = Over and OverCloseDevig – OverOddsThreshold between OverCloseDevig \* FiveUnitThreshold and OverCloseDevig \* TenUnitThreshold, then 5**
3. **If TotalPick = Over and OverCloseDevig – OverOddsThreshold > OverCloseDevig \* TenUnitThreshold, then 10**
4. **If none of the above are applicable, then 0**

**ImpliedProbabilityOutrightPickWagerProfit – equal to winnings (or losses) - wager**

**ImpliedProbabilityOutrightPickHomeAwayWagerProfit - equal to winnings (or losses) - wager**

**ImpliedProbabilityOutrightPickFavDogWagerProfit - equal to winnings (or losses) - wager**

**ImpliedProbabilitySpreadPickWagerProfit - equal to winnings (or losses) - wager**

**ImpliedProbabilitySpreadPickHomeAwayWagerProfit - equal to winnings (or losses) - wager**

**ImpliedProbabilitySpreadPickFavDogWagerProfit - equal to winnings (or losses) - wager**

**ImpliedProbabilityTotalPickWagerProfit - equal to winnings (or losses) - wager**

**ImpliedProbabilityOutrightPickHomeOddsThreshold – returns passed in value**

**ImpliedProbabilityOutrightPickAwayOddsThreshold - returns passed in value**

**ImpliedProbabilityOutrightPickFavoriteOddsThreshold - returns passed in value**

**ImpliedProbabilityOutrightPickDogOddsThreshold - returns passed in value**

**ImpliedProbabilitySpreadPickHomeOddsThreshold - returns passed in value**

**ImpliedProbabilitySpreadPickAwayOddsThreshold - returns passed in value**

**ImpliedProbabilitySpreadPickFavoriteOddsThreshold - returns passed in value**

**ImpliedProbabilitySpreadPickDogOddsThreshold - returns passed in value**

**ImpliedProbabilityTotalPickOverOddsThreshold - returns passed in value**

**ImpliedProbabilityTotalPickUnderOddsThreshold - returns passed in value**

**OneUnitThreshold - returns passed in value**

**FiveUnitThreshold - returns passed in value**

**TenUnitThreshold - returns passed in value**

**Total Test Coverage – 2/251 (0.79%)**

**Feature Roadmap –**

**Implement AvgOdds tracking for each market in Seasons table**

**Season Accuracy Report**

**Team Accuracy Matrix**

**Unit Testing (Goal is 75% by 8/1/23)**