



ANALYTICS AND DATA

TechCasts

# OAC/OAS Fantasy Football Decision Support Tool

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Dec 17th, 2020

**Presenter:** Opal Alapat

**Subject:** You Complete Me: The Long-Awaited Union of Oracle EPM & Analytics Cloud

Feb 4th, 2021

**Metadata – the Key to User Engagement**

Presented by **Jon Mead**

February 16–18, 2021

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# Our goal in this presentation

Illustrate techniques to curate data from multiple sources and create a robust decision support tool with OAC/OAS

- Blend aspects of classic and modern analytics
- Generate and Import datasets
- Explore data for hidden insights using add Statistics
  - Reference lines
  - Trends
  - Clusters and Outliers
- Use Case: NFL Fantasy Team Decision Support

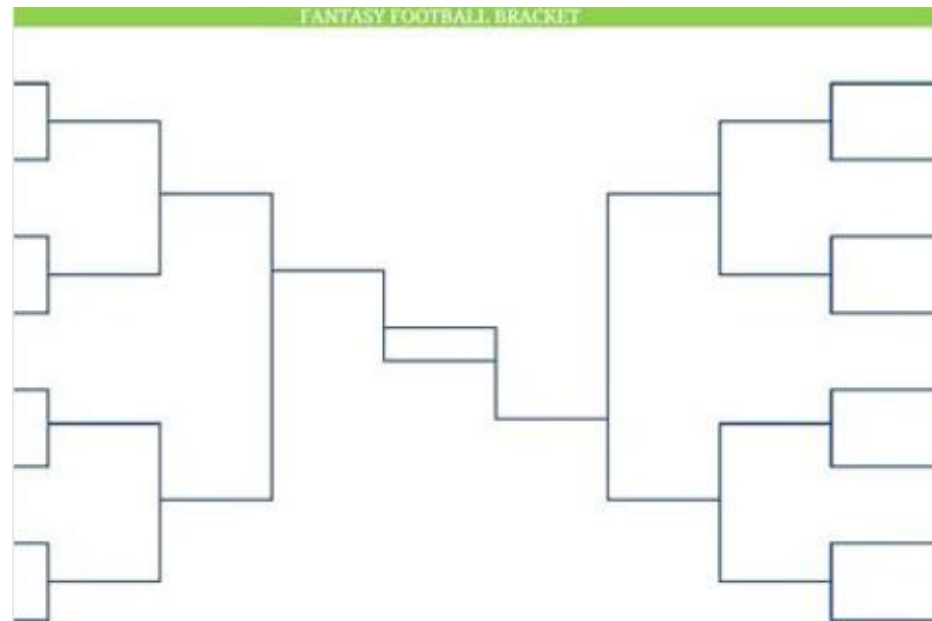




# Fantasy Football

A game that allows you to be the owner, general manager, and coach of your own NFL team

- Your team competes in a league typically composed of 10 or 20 teams, you can have teams in multiple leagues



# Fantasy Football

A game that allows you to be the owner, general manager, and coach of your own NFL team

- You draft your team(s) at the beginning of the season made up of NFL players





# Fantasy Football

A game that allows you to be the owner, general manager, and coach of your own NFL team

- You have a game schedule of the teams in your league you will compete against each week

fantasy-info.com		Fantasy Football Information- AFC Draft Board Cheat Sheet for 2009														
League	Conf	Team Name	QB	QB	RB	Running Back	WR	Wide Receiver	TE	Tight Ends	Kickers	Def Value	Defensive Rankings	Def Base	Bye Wk	
AFC	AW	Lions	25	Matt Cassel	Rb	Larry Johnson	Wr	Dwayne Bowe	TE	Sean Ryan	Connor Barth		38	Pts Allowed: 25	Base: 4 - 3	8
			25	Tyler Thigpen	Rb	Jamaal Charles	Wr	Mark Bradley	TE	Brad Cottam			Rush: 36	Backs: 19		
					Rb	Kolby Smith	Wr	Bobby Engram	TE	W. Devard Darling			Pass: 28	T-Overs: 28		
AFC	AE	NY Jets	25	Kellen Clemens	Rb	Thomas Jones	Wr	Jericho Colchery	TE	Dustin Keller	Jay Feely		7	Pts Allowed: #18	Base: 3-4	9
			25	Mark Sanchez	Rb	Shonn Green	Wr	Champ Stuckey	TE	James Dearth			Rush: #7	Backs: 41		
					Rb	Sam Washington	Wr	David Clowney					Pass: #23	T-Overs: 25		
AFC	AC	Bengals	25	Carson Palmer	Rb	Cedric Benson	Wr	Chad Johnson	TE	Reggie Kelly	Shayne Graham		24	Pts Allowed: 13	Base: 4 - 3	8
			25	J.T. O'Sullivan	Rb	Kenny Watson	Wr	Lavenexia Coles	TE	Ben Ulrich			Rush: 21	Backs: 17		
					Rb	Brian Leonard	Wr	Chris Henry	TE	Chase Coffman			Pass: 15	T-Overs: 25		
AFC	AW	Raiders	25	JaMarcus Russell	Rb	Darnell McFadden	Wr	Darius Heyward-Bey	TE	Zach Miller	Sebastian Janikowski		26	Pts Allowed: 24	Base: 4 - 3	9
			25	Jeff Garcia	Rb	Justin Fargas	Wr	Johnnie Lee Higgins	TE	Tony Stewart			Rush: 31	Backs: 32		
					Rb	Michael Bush	Wr	Chaz Schilens					Pass: 18	T-Overs: 24		
AFC	AS	2400hrs	25	David Garrard	Rb	Maurice Jones - Drew	Wr	Torry Holt	TE	Mercedes Lewis	Josh Scobee		25	Pts Allowed: 21	Base: 4 - 3	7
			25	Greg Leshon	Rb	Shaunay Washington	Wr	Mike Walker	TE	Greg Eilandis			Rush: 13	Backs: 29		
					Rb	Greg Jones							Pass: 28	T-Overs: 24		
AFC	AE	Bills	25	Trent Edwards	Rb	Marshawn Lynch	Wr	Terrell Owens	TE	Shann Nelson	Ron Leshel		17	Pts Allowed: 14	Base: 4 - 3	9
			25	Ryan Fitzpatrick	Rb	Fred Jackson	Wr	Lee Evans	TE	Derek Schouman			Rush: 22	Backs: 24		
					Rb	Jonimo Rhodes	Wr	Josh Reed					Pass: 13	T-Overs: 18		
AFC	AW	Devils	25	Kyle Orton	Rb	Lwenshon Marens	Wr	Brandon Marshall	TE	Tony Scheffler	Matt Preter		32	Pts Allowed: 35	Base: 4 - 3	7
			25	Chris Simms	Rb	Jamoni Jordan	Wr	Eddie Royal	TE	Daniel Graham			Rush: 27	Backs: 28		
					Rb	Jonell Buckhalter	Wr	Brandon Stokley	TE	Richard Quinn			Pass: 28	T-Overs: 15		
AFC	AS	Texans	25	Matt Schaub	Rb	Steve Slaton	Wr	Andre Johnson	TE	Owen Daniels	Kris Brown		23	Pts Allowed: 27	Base: 4 - 3	10
			25	Jan Orlovsky	Rb	Chris Brown	Wr	Kevin Walters	TE	James Casey			Rush: 23	Backs: 23		



# The Game has grown in popularity and complexity

You are the team Owner, General Manager, and Coach

- You can release players
- You can trade players
- You can pick up players off the wire (these are players that are not on any other team)



# Our Leagues

There are several types of leagues and often rules and operating formats will vary

- In our league we have about 15 to 20 players per team across 4 positions:
  - Quarter Back – up to 3 per team, we have 1, can play 1 per game
  - Running Back – up to 7 per team, we have 5, can play 2 per game
  - Tight End – up to 4 per team, we have 2, can play 1 per game
  - Kicker – up to 2 per team, we have 1, can play 1 per game
  - Wide Receiver – up to 8 per team, we have 6, can play 3 per game
- We have 4 teams that participate in 4 different leagues



# OAS/OAC enables

Oracle Analytics Cloud/Server includes classic and modern

- AI-powered<sup>analytics</sup>,  
self-service analytics capabilities for data preparation
- visualization
- enterprise reporting
- augmented analysis
- natural language processing/generation

You can use these features to:



- Collect up-to-date data from your organization.
- Present the data in easy-to-understand formats (such as tables and graphs).
- Deliver data in a timely fashion to the employees in your organization.

# Our current status: Week 12

## Situation:

- We are at the end of week 11

## Mission:

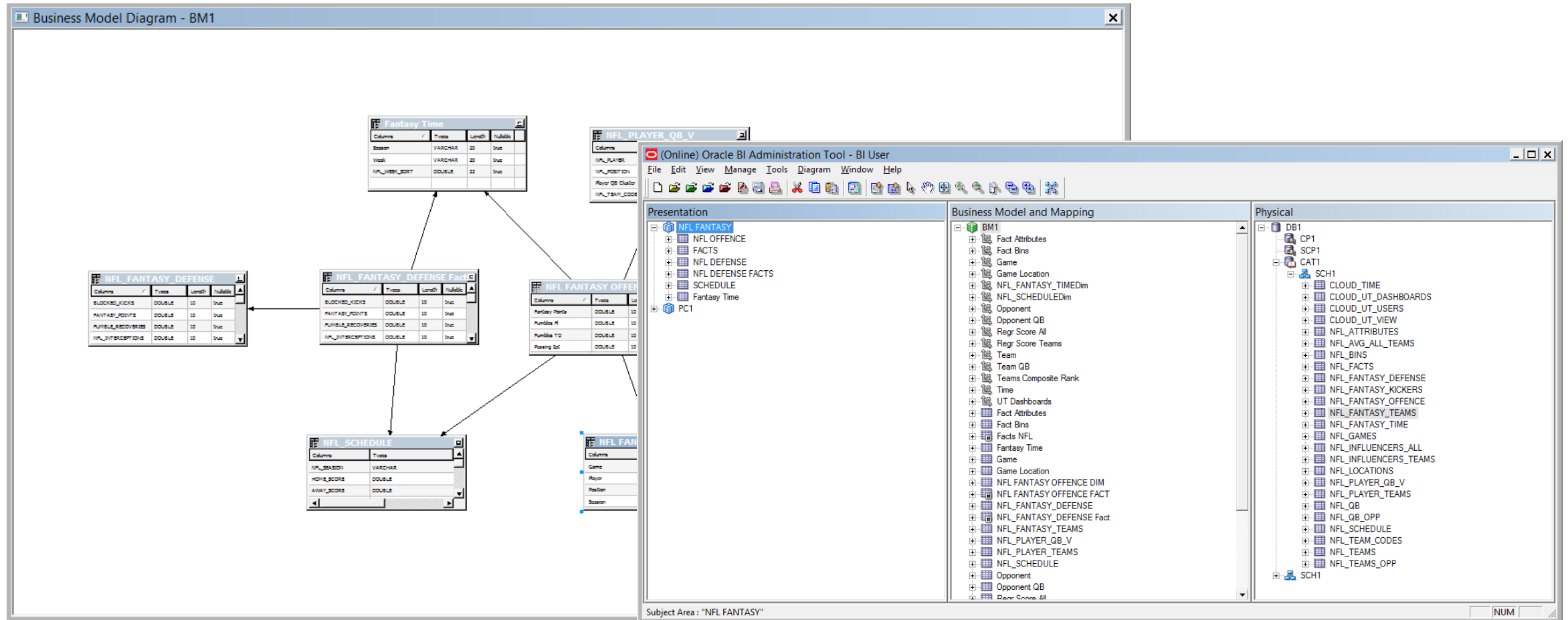
- Recommend 3 RW on each team to start in week 12

## Constraint:

- Have a 2 days



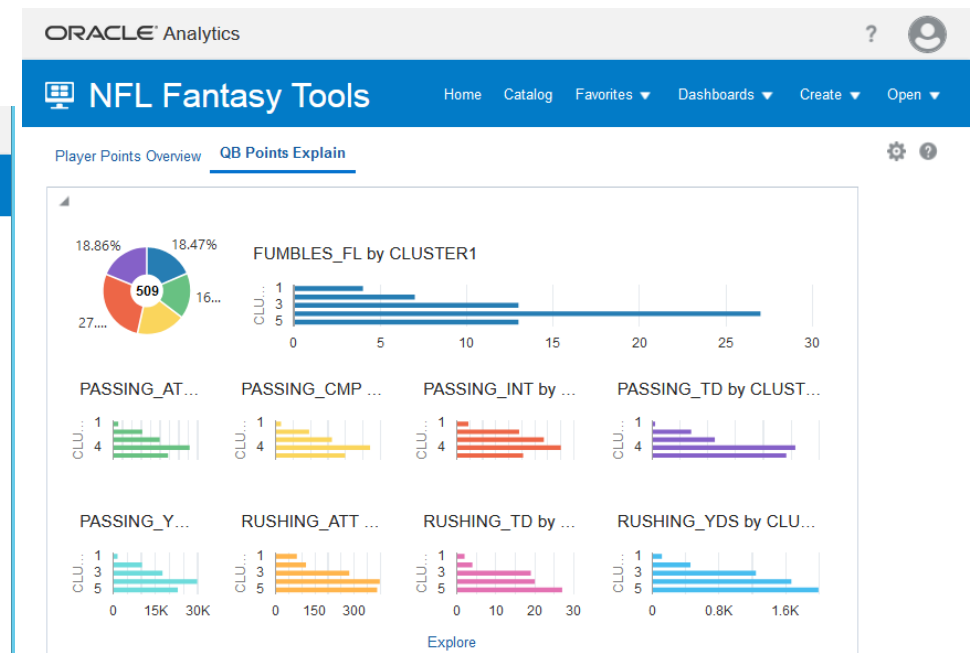
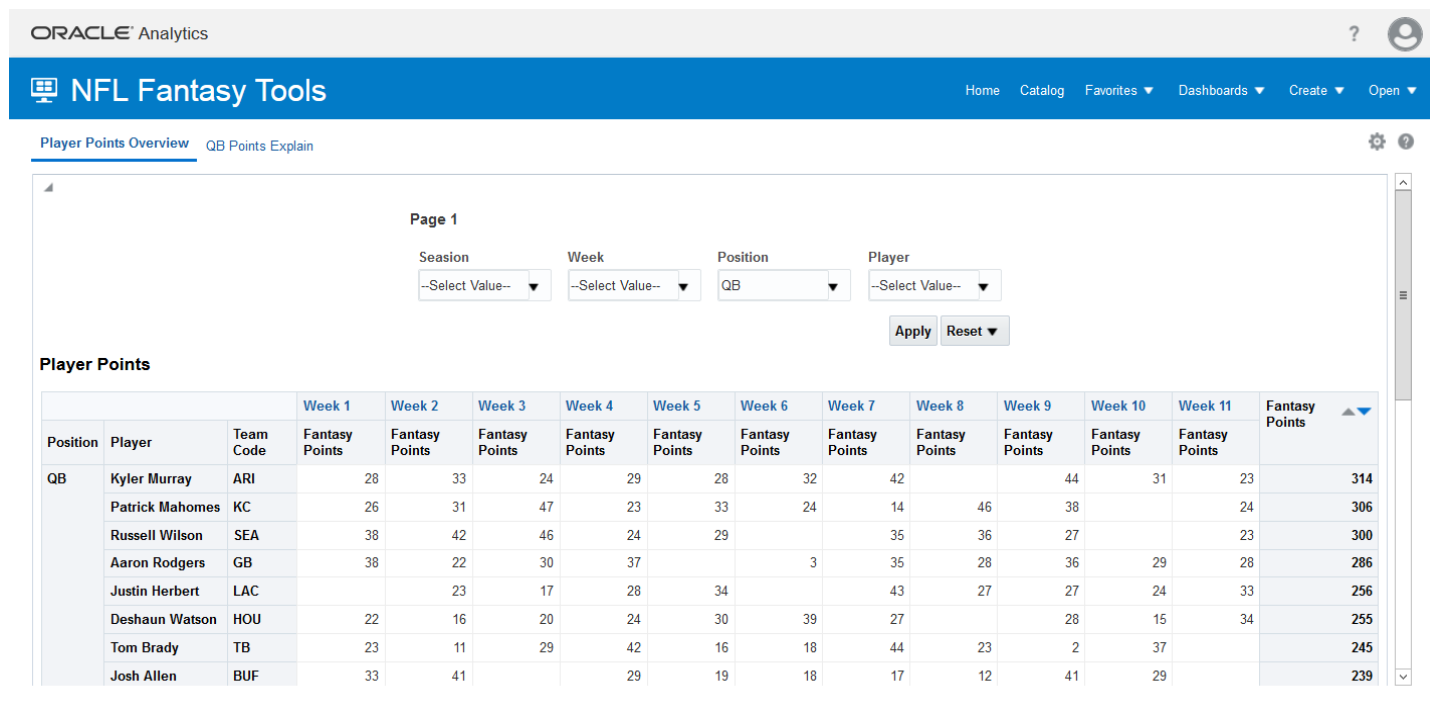
# We have a classic data model



# Classic Analytics Dashboards

We have used the classic data model to create classic dashboards to support QB decisions

- QB Player Points Overview





# Navigate to Oracle Data Visualization

A project enables you to dynamically explore multiple data sets in graphical way, all within a single interface. You can upload data from many commonly used data sources to create robust sets of information within project visualizations.

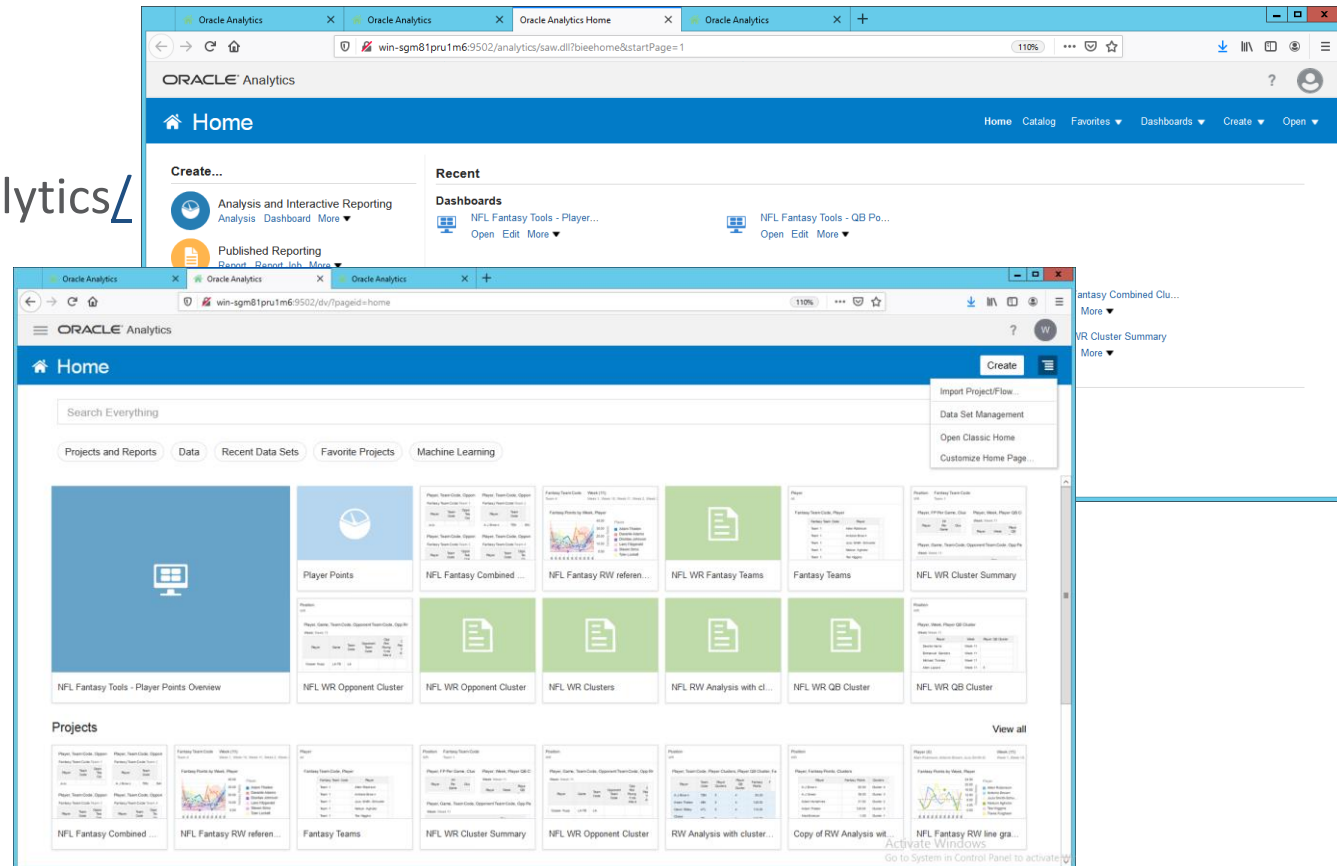
ORACLE Analytics

<http://win-sgm81pru1m6:9502/analytics/>

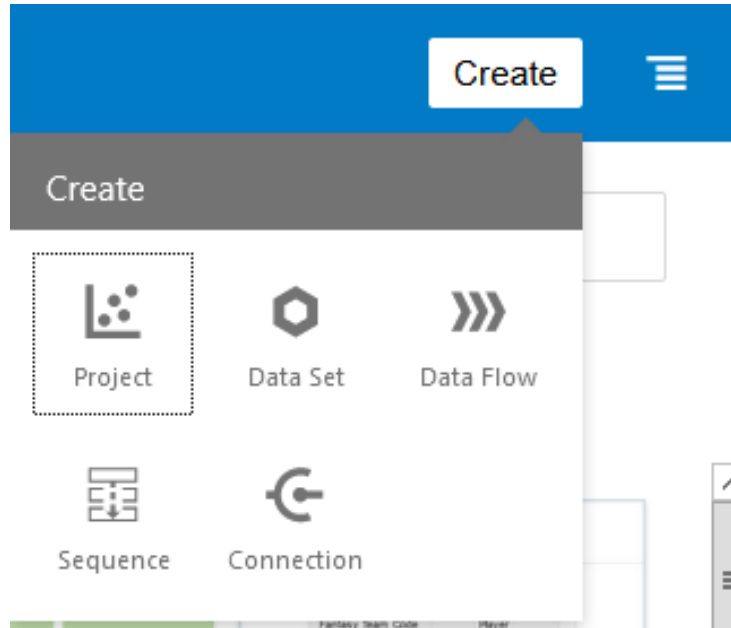
VS

<http://win-sgm81pru1m6:9502/dv/>

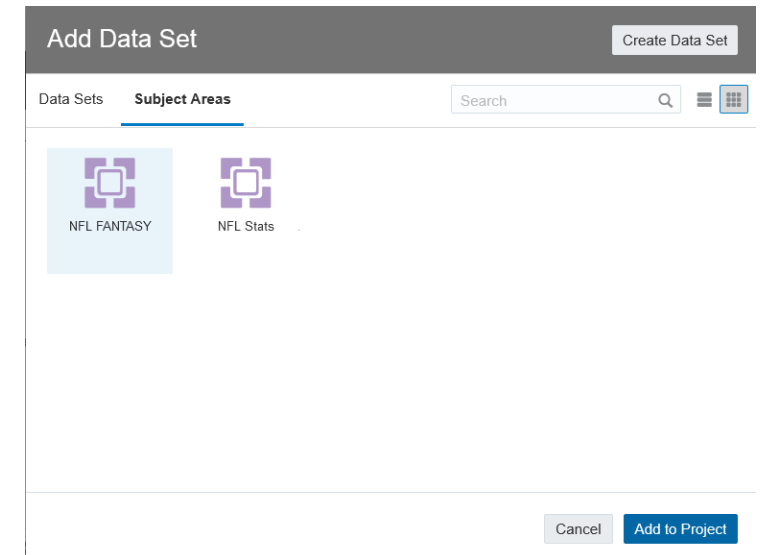
ORACLE Data Visualization



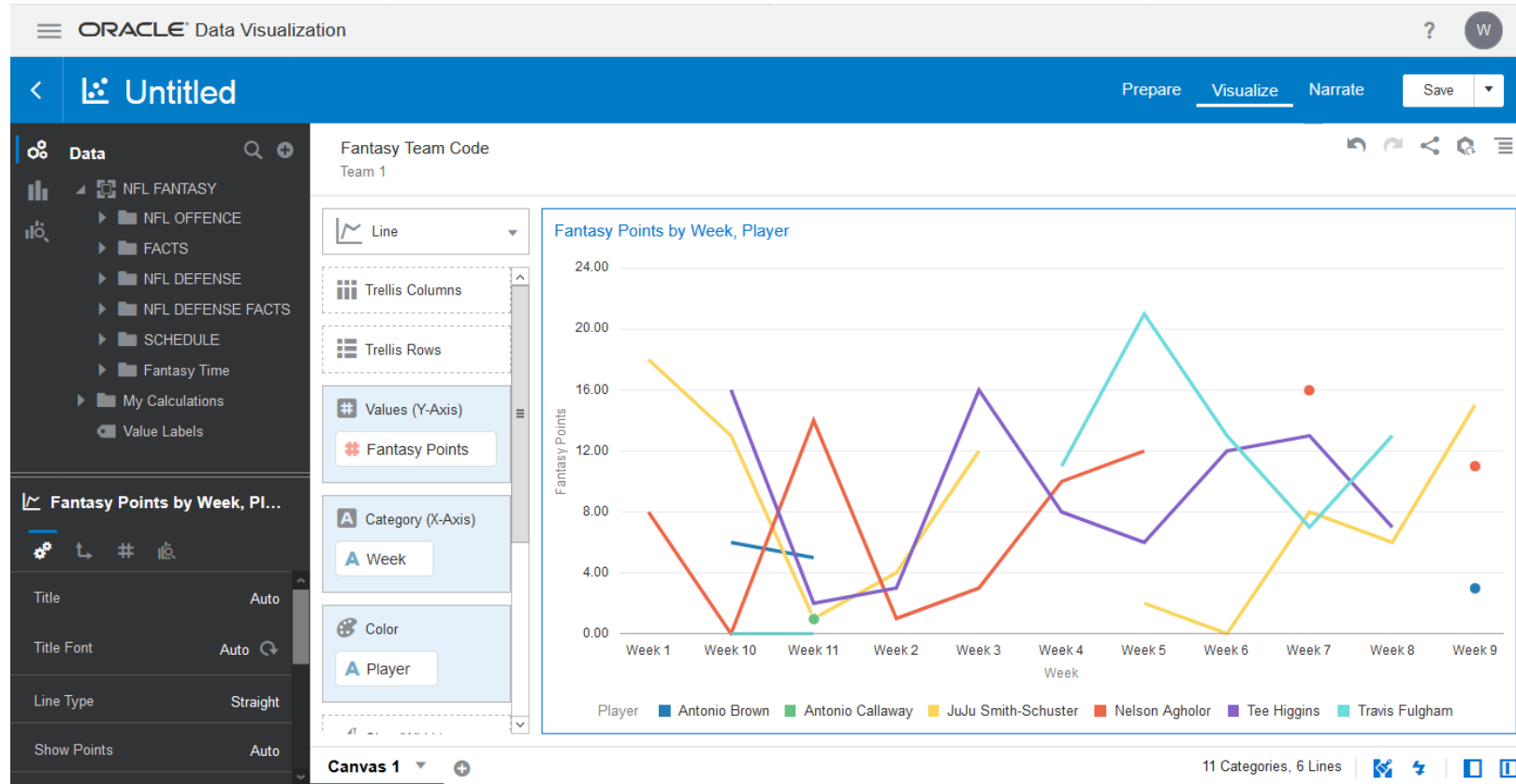
# Create a Project to explore the data



- A project enables you to dynamically explore multiple data sets in graphical way, all within a single interface.
- We can use classic subject areas or upload data from many commonly used data sources to create robust sets of information within project visualizations.



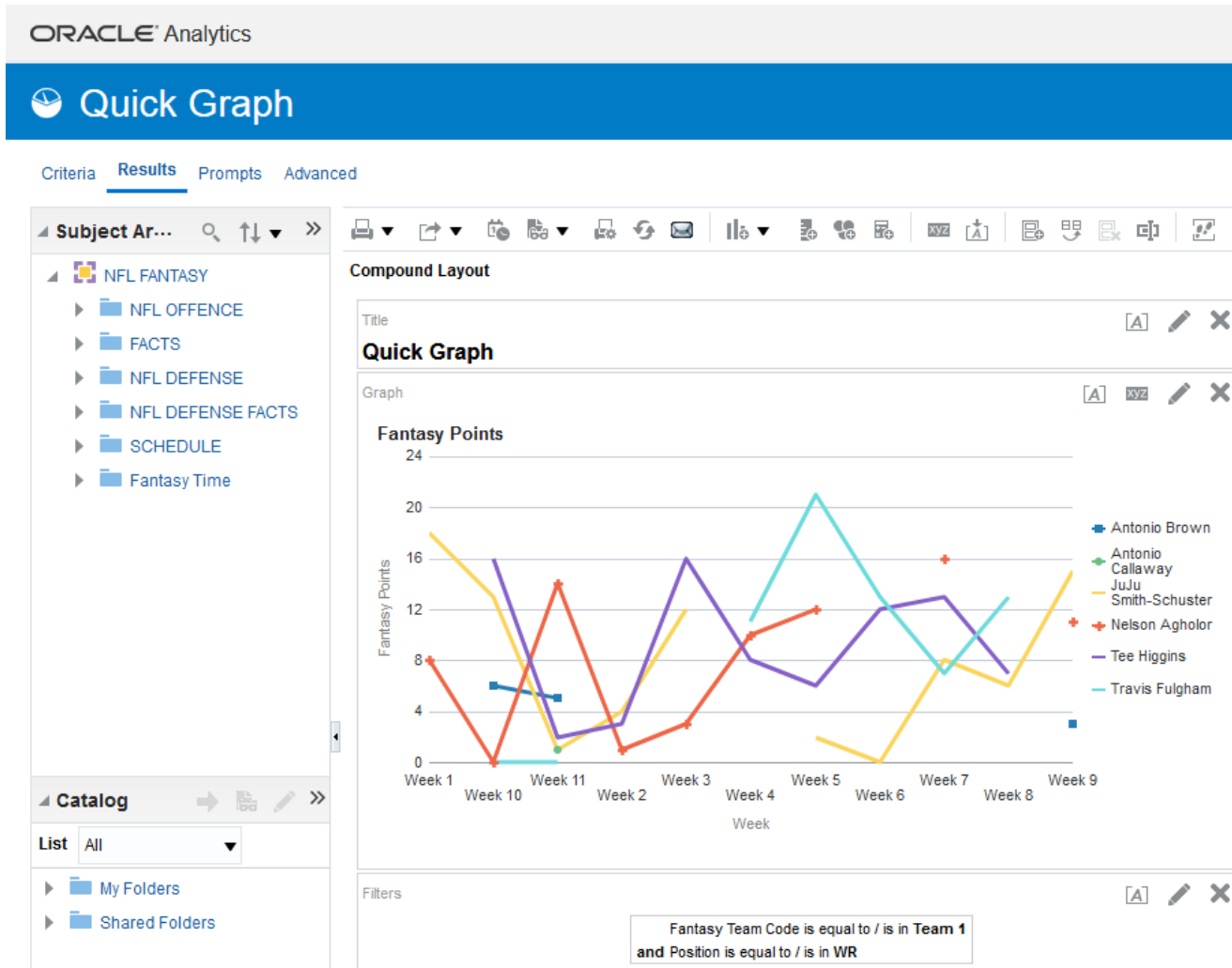
# Getting started with our analysis



I started working with the classical data model in data vis.

Create a quick project with a line graph visual

# Quick Graph





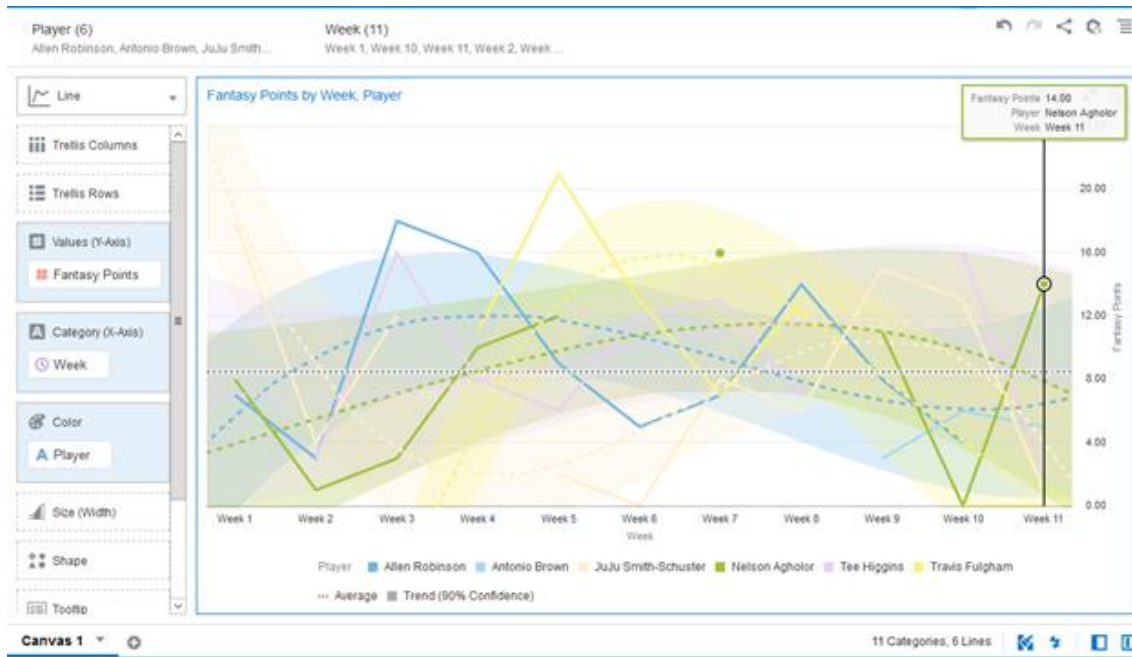
# Average Reference Line



Here I can use “right click, Add Statistics” on the visualization to add an average reference line to the graph.

This allows us to see how each player compared to the average of all the players.

# Trend

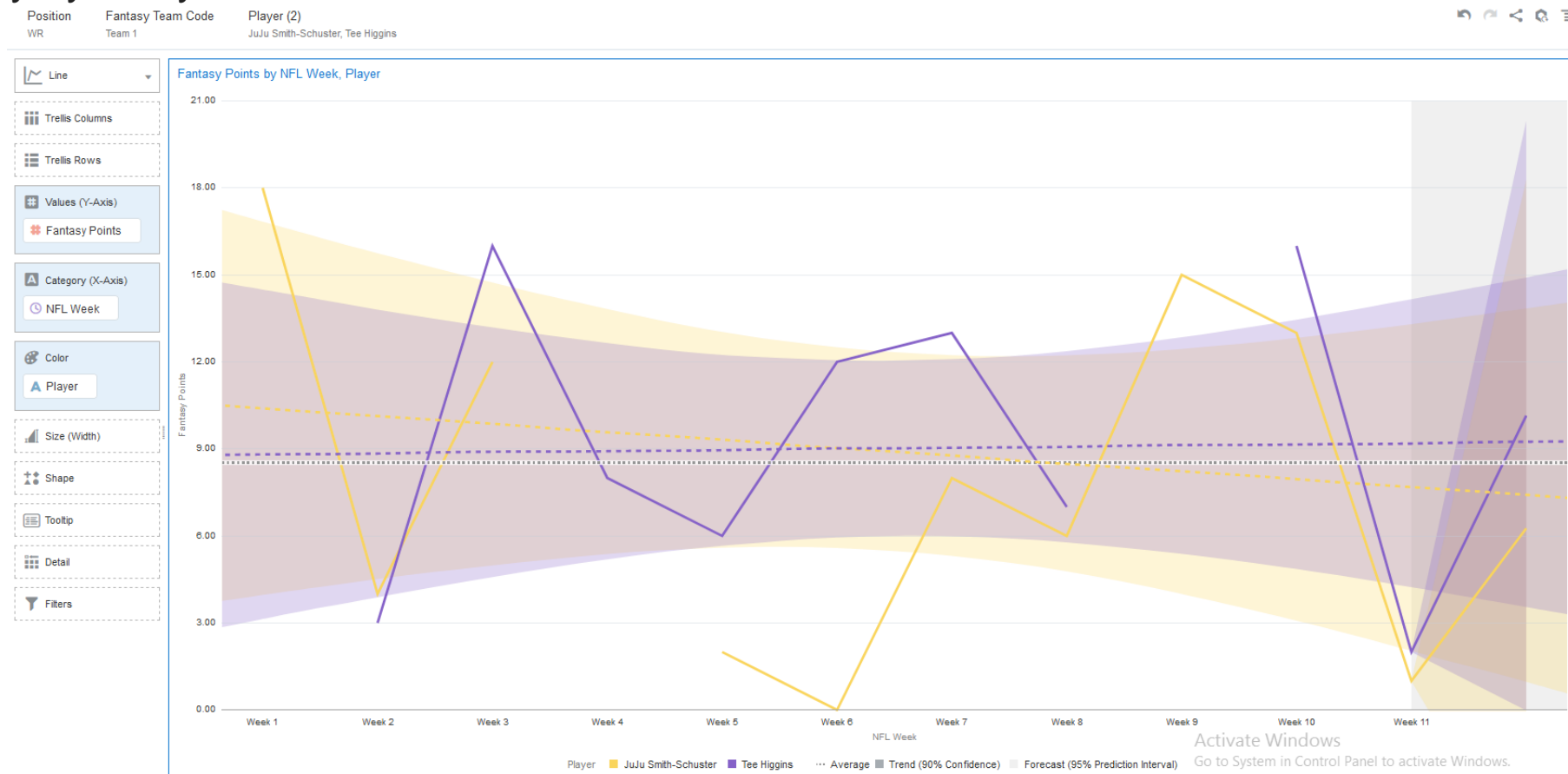


Next, I wanted to analyze the trend of each player, so again I'm able to right-click, "Add Statistics" and select Trend

Here I can observe the trends of each player.

# Forecast

- Forecasting is the process of making predictions of the future, based on past and present data and most commonly by analysis of trends



# Clusters

Cluster analysis or clustering is the task of grouping a set of objects in such a way that objects in the same group are grouped in a coherence with maximal proximity to each other than to those in other groups.

Wide Receivers performance prediction concepts:

- How has the WR performed in the past?
- How has the WR's QB been performing?
- Opponent defense ranking by receiving yards allowed?



# Player Clusters

- How has the WR performed in the past?

The screenshot shows the Oracle Data Studio interface. The left sidebar contains a 'Data' section with a tree view of the database schema, including 'NFL FANTASY', 'NFL OFFENCE', 'FACTS', 'NFL DEFENSE', 'NFL DEFENSE FACTS', 'SCHEDULE', 'Fantasy Time', 'My Calculations', and 'Value Labels'. Below this is a 'Player, FP Per Game, Clusters' section with a 'Add Statistics' button and a 'Clusters' section showing 'Algorithm: Hierarchical Clustering' and 'Groups: 5'. The main area displays a table titled 'Player, FP Per Game, Clusters' with the following data:

Player	FP Per Game	Clusters
A.J. Brown	11.63	Cluster 5
Adam Thielen	12.90	Cluster 5
Allen Lazard	9.50	Cluster 5
Allen Robinson	9.10	Cluster 5
Brandon Aiyuk	9.75	Cluster 5
Calvin Ridley	13.75	Cluster 5
Chase Claypool	11.00	Cluster 5
Corey Davis	9.85	Cluster 5
D.J. Moore	9.73	Cluster 5
D.K. Metcalf	13.50	Cluster 5
Davante Adams	17.50	Cluster 5
DeAndre Hopkins	11.10	Cluster 5
Jamison Crowder	9.50	Cluster 5
Julio Jones	10.13	Cluster 5
Justin Jefferson	10.60	Cluster 5
Keenan Allen	11.20	Cluster 5
Kenny Golladay	11.00	Cluster 5
Mike Evans	9.64	Cluster 5
Odell Beckham Jr.	10.00	Cluster 5

The bottom status bar indicates '204 Rows, 3 Columns'.

This simple report shared as a CSV and saved.

# New Calculation

We wanted to get the Fantasy points per game

Very robust calculation wizard:

Edit Calculation

Name

Points per Game

f(x)

Fantasy Points/Number of Games

Validate

Save

Cancel

Search

Q

► Operators

► Aggregate

► Running Aggregate

► String

► Math

► SelectedData

▲

Select a function to see description

▼

# Players Outliers

- Outliers are data records that are located the furthest away from the average expectation of individuals values.

ORACLE Data Visualization

NFL WR Cluster Summary

Prepare Visualize Narrate Save

Position: WR, Fantasy Team Code: All

Table

Rows

Player

FP Per Game

Clusters

Outliers

Color

Size

Shape

Tooltip

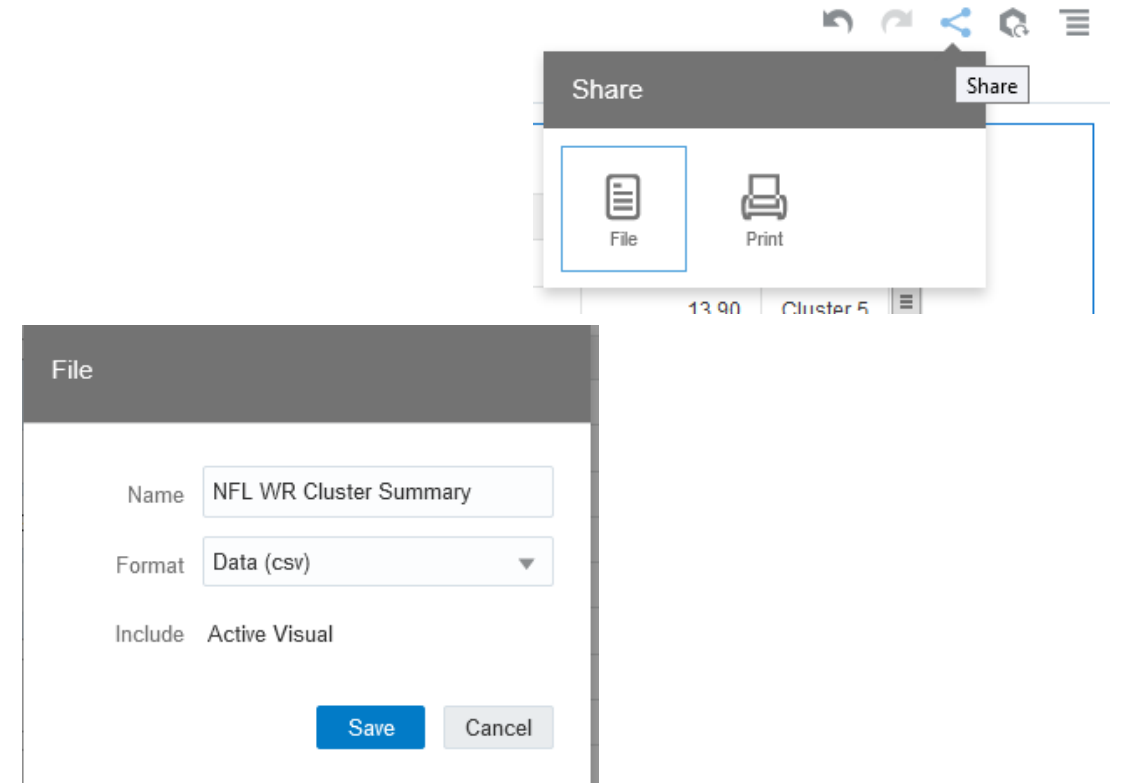
Filters

Player, FP Per Game, Clusters, Outliers

Player	FP Per Game	Clusters	Outliers
Davante Adams	17.50	Cluster 5	Non-Outlier
Tyreek Hill	13.90	Cluster 5	Outlier
Calvin Ridley	13.75	Cluster 5	Outlier
D.K. Metcalf	13.50	Cluster 5	Outlier
Adam Thielen	12.90	Cluster 5	Non-Outlier
Richie James	12.50	Cluster 5	Outlier
Tyler Lockett	11.90	Cluster 5	Outlier
A.J. Brown	11.63	Cluster 5	Outlier
Keenan Allen	11.20	Cluster 5	Outlier
DeAndre Hopkins	11.10	Cluster 5	Non-Outlier
Chase Claypool	11.00	Cluster 5	Outlier
Kenny Golladay	11.00	Cluster 5	Outlier
Stefon Diggs	10.90	Cluster 5	Non-Outlier
Justin Jefferson	10.60	Cluster 5	Non-Outlier
Robert Woods	10.50	Cluster 5	Non-Outlier
Will Fuller	10.30	Cluster 5	Non-Outlier
Terry McLaurin	10.20	Cluster 5	Outlier

# Create Data Set

- Using the share icon, select file
- Enter the desired file name
- Select "Data (csv)" for format
- Select save





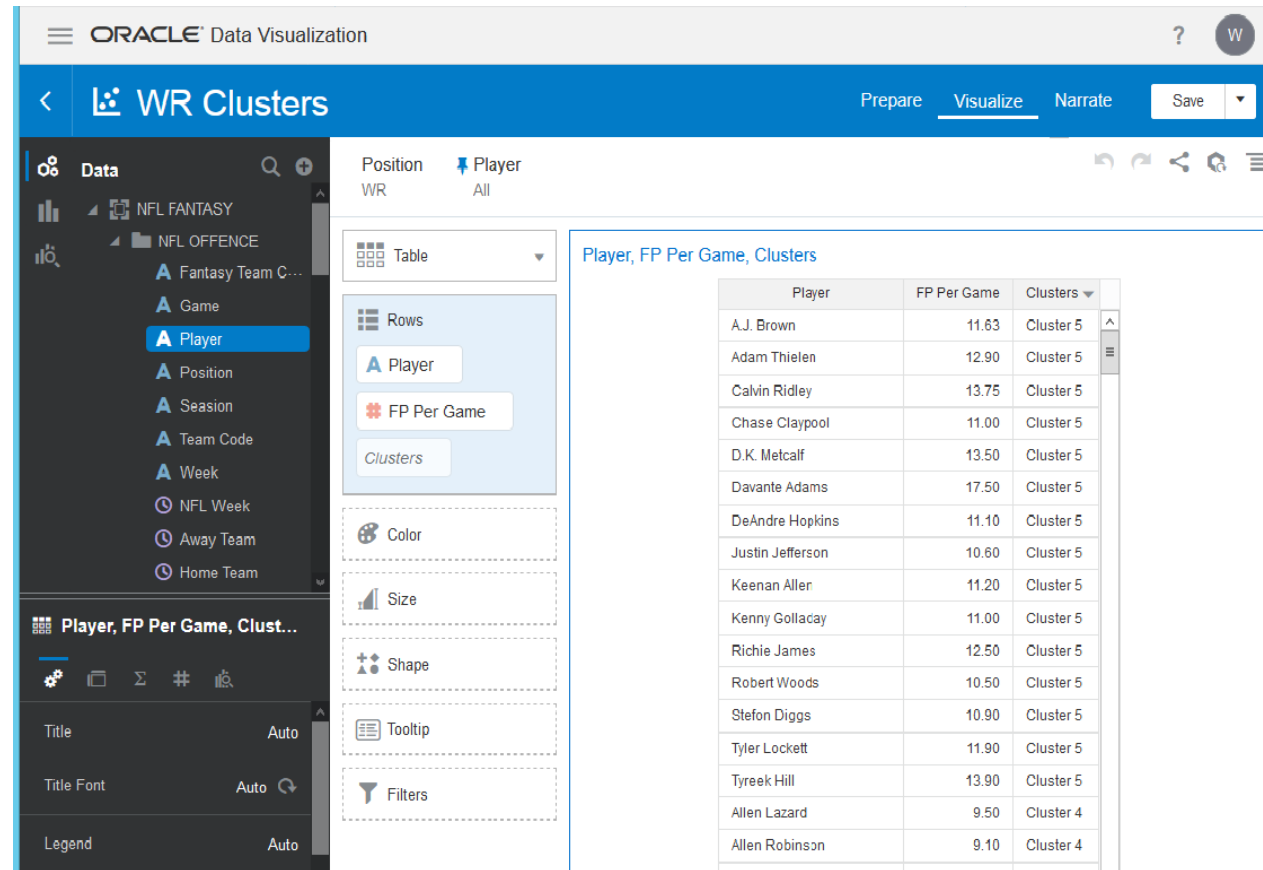


# NFL Fantasy Decision Support Case

- Having just a few days available, we need to make recommendations for which WR to play for week 12 for 4 teams.
- Based on what we know about the data we have decided to focus on cluster calculations.
  - Player clusters by fantasy points per week as of week 11
  - Player clusters by the player's QB fantasy points at week 11
  - Player clusters by passing yards allow of the opposing defence as of week 11

# Player clusters by fantasy points per week as of week 11

Create dataset for WR clusters



# Player clusters by the player's QB fantasy points at week 11

Create dataset for WR player QB fantasy points

The screenshot shows the Oracle Data Studio interface for a dataset named "NFL WR QB Cluster". The interface is divided into several sections:

- Top Bar:** Contains navigation tabs for "Prepare", "Visualize" (which is active), and "Narrate", along with a "Save" button.
- Left Panel (Data):** A tree view showing the data source "NFL FANTASY" and its hierarchy: "NFL OFFENCE" > "Fantasy Team C..." > "Game" > "Player" > "Position" > "Seasion" > "Team Code" (highlighted in blue) > "Week" > "NFL Week" > "Away Team" > "Home Team".
- Center Panel (Table View):** Displays a table with the following columns: "Player", "Team Code", "Week", and "Player QB Cluster". The table is filtered for "Week: Week 11". The data shows 108 rows of players and their QB fantasy points.
- Right Panel (Visualize):** Contains a "Canvas 1" section with a "Table" view selected. It shows a list of rows with columns "Player", "Team Code", "Week", and "Player QB Cluster". The "Player QB Cluster" column is highlighted in blue.
- Bottom Bar:** Shows the status "108 Rows, 4 Columns" and icons for various visualization types.

Player	Team Code	Week	Player QB Cluster
Allen Lazard	GB	Week 11	5
Andy Isabella	ARI	Week 11	5
Antonio Brown	TB	Week 11	5
Brandin Cooks	HOU	Week 11	5
Byron Pringle	KC	Week 11	5
Chris Godwin	TB	Week 11	5
Christian Kirk	ARI	Week 11	5
D.K. Metcalf	SEA	Week 11	5
Darrius Shepherd	GB	Week 11	5
Davante Adams	GB	Week 11	5
David Moore	SEA	Week 11	5
DeAndre Hopkins	ARI	Week 11	5
Demarcus Robinson	KC	Week 11	5
Equanimeous St. Brown	GB	Week 11	5
Jalen Guyton	LAC	Week 11	5
Keenan Allen	LAC	Week 11	5
Keke Coutee	HOU	Week 11	5

# Player clusters by passing yards allow of the opposing defence as of week 11

Create dataset for WR Opponent Clusters

**NFL WR Opponent Cluster** Prepare Visualize Narrate Save

Position: WR

Table

Rows

- Player
- Game
- Team Code
- Opponent Te...
- Opp Rnk Pss...
- Opp Passing ...
- Clusters

Color

Size

Shape

Canvas 1

111 Rows, 7 Columns

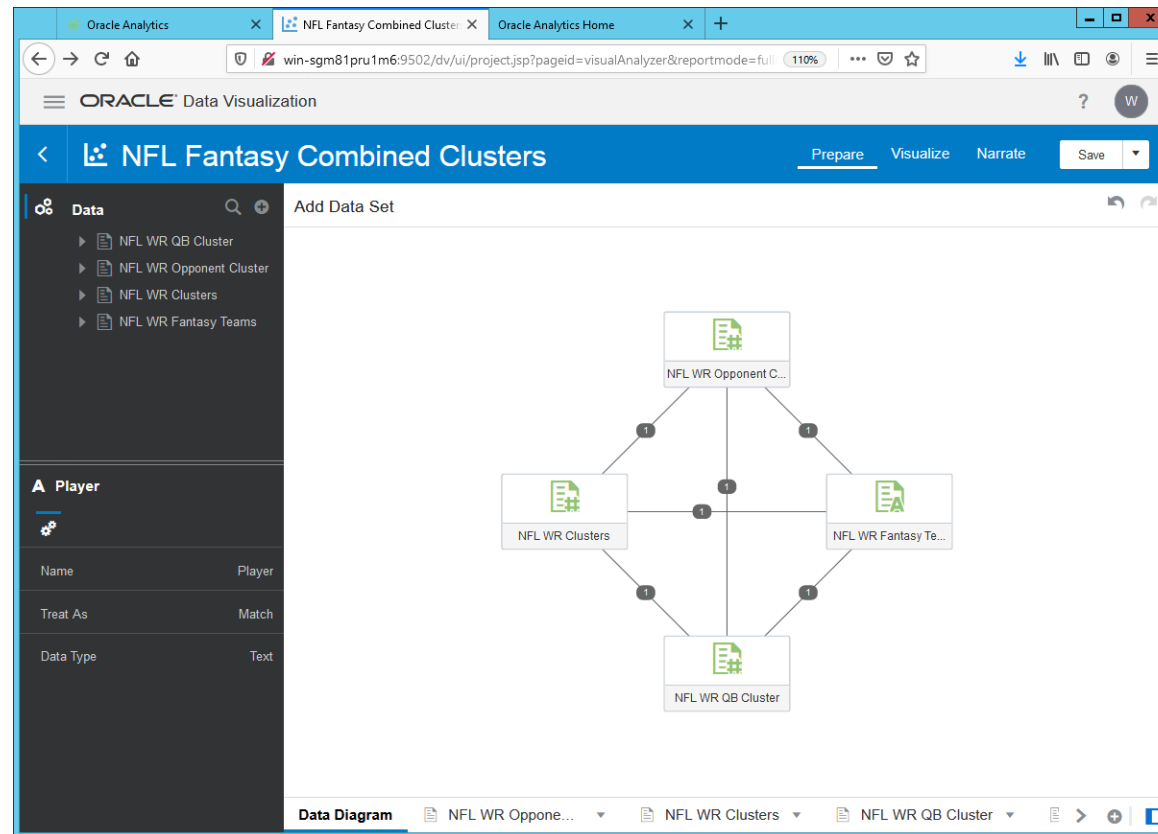
Player, Game, Team Code, Opponent Team Code, Opp Rnk Pssng Yrds Allwd, Opp P...

Week: Week 11

Player	Game	Team Code	Opponent Team Code	Opp Rnk Pssng Yrds Allwd	Opp Passing Yrds Allwd	Clusters
Brandin Cooks	NE-HOU	HOU	NE	5.00	344.00	Cluster 5
Byron Pringle	KC-LV	KC	LV	2.00	352.00	Cluster 5
Damiere Byrd	NE-HOU	NE	HOU	3.00	349.00	Cluster 5
Demarcus Robinson	KC-LV	KC	LV	2.00	352.00	Cluster 5
Donte Moncrief	NE-HOU	NE	HOU	3.00	349.00	Cluster 5
Jakobi Meyers	NE-HOU	NE	HOU	3.00	349.00	Cluster 5
Jalen Guyton	NYJ-LAC	LAC	NYJ	4.00	347.00	Cluster 5
Josh Reynolds	LV-TB	LV	TB	1.00	376.00	Cluster 5
Keenan Allen	NYJ-LAC	LAC	NYJ	4.00	347.00	Cluster 5
Keke Coutee	NE-HOU	HOU	NE	5.00	344.00	Cluster 5
Mecole Hardman	KC-LV	KC	LV	2.00	352.00	Cluster 5
Mike Williams	NYJ-LAC	LAC	NYJ	4.00	347.00	Cluster 5
N'Keal Harry	NE-HOU	NE	HOU	3.00	349.00	Cluster 5

# Blend Cluster datasets

Data sets are based on the classic data model and enterprise data





# Tell the story

Data behind the recommendations tells the story for team 1

🔍 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, ...

Fantasy Team Code: Team 1

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼
JuJu Smith-Schuster	PIT	6.0	4	2.0	12.0
Nelson Agholor	LV	6.0	4	2.0	12.0
Tee Higgins	CIN	6.0	4	1.0	9.0
Travis Fulgham	PHI	6.0	4	1.0	9.0
Antonio Brown	TB	4.5	5	1.0	8.5
Antonio Callaway	MIA	1.5	3	0.5	4.0

# Tell the story

## Data behind the recommendations tells the story for team 2

Player, Team Code, Opponent Team Code, Player Clusters, Player QB Cluster, Opponent Clusters, Sum of clusters

Fantasy Team Code: Team 2

Player	Team Code	Opponent Team Code	Player Clusters	Player QB Cluster	Opponent Clusters	Sum of clusters ▼
A.J. Brown	TEN	BAL	5	4	3	12
Calvin Ridley	ATL	NO	5	4	2	11
Equanimeous St. Brown	GB	IND	1	5	4	10
T.Y. Hilton	IND	GB	2	3	4	9
D.J. Moore	CAR	DET	4	1	3	8
Antonio Callaway	MIA	DEN	1	3	1	5

# Tell the story

## Data behind the recommendations tells the story for team 3

Player, Team Code, Opponent Team Code, Player Clusters, Player QB Cluster, Opponent Clusters, Sum of clusters

Fantasy Team Code: Team 3

Player	Team Code	Opponent Team Code	Player Clusters	Player QB Cluster	Opponent Clusters	Sum of clusters ▼
Jerry Jeudy	DEN	MIA	4	3	4	11
Tyler Lockett	SEA	ARI	5	5	1	11
Tee Higgins	CIN	WAS	4	4	2	10
Denzel Mims	NYJ	LAC	3	2	2	7
Rashard Higgins	CLE	PHI	3	3	1	7
Chris Conley	JAX	PIT	2	2	1	5

# Tell the story

## Data behind the recommendations tells the story for team 4

Player, Team Code, Opponent Team Code, Player Clusters, Player QB Cluster, Opponent Clusters, Sum of clusters

Fantasy Team Code: Team 4

Player	Team Code	Opponent Team Code	Player Clusters	Player QB Cluster	Opponent Clusters	Sum of clusters ▼
Davante Adams	GB	IND	5	5	4	14
Adam Thielen	MIN	DAL	5	4	4	13
Diontae Johnson	PIT	JAX	4	4	4	12
Tyler Lockett	SEA	ARI	5	5	1	11
Larry Fitzgerald	ARI	SEA	2	5	3	10
Steven Sims	WAS	CIN	3	2	1	6

# Tell the story

## Weighed values

- What if we want to give more weight to the players cluster, and less to the Opponent's

"Opponent Clusters"\*.5

"Player Clusters"\*1.5



# Tell the story

Data behind the weighted recommendations tells the story for team 1

 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters

Fantasy Team Code: Team 1

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼
JuJu Smith-Schuster	PIT	6.0	4	2.0	12.0
Nelson Agholor	LV	6.0	4	2.0	12.0
Tee Higgins	CIN	6.0	4	1.0	9.0
Travis Fulgham	PHI	6.0	4	1.0	9.0
Antonio Brown	TB	4.5	5	1.0	8.5
Antonio Callaway	MIA	1.5	3	0.5	4.0

# Tell the story

Data behind the weighted recommendations tells the story for team 2

🔍 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters



Fantasy Team Code: Team 2

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼
A.J. Brown	TEN	7.5	4	1.5	11.5
Calvin Ridley	ATL	7.5	4	1.0	10.0
Equanimeous St. Brown	GB	1.5	5	2.0	9.5
T.Y. Hilton	IND	3.0	3	2.0	9.5
D.J. Moore	CAR	6.0	1	1.5	9.0
Antonio Callaway	MIA	1.5	3	0.5	4.0

# Tell the story

## Data behind the weighted recommendations tells the story for team 3

 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters

Fantasy Team Code: Team 3

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼
Jerry Jeudy	DEN	6.0	3	2.0	11.5
Tee Higgins	CIN	6.0	4	1.0	9.0
Tyler Lockett	SEA	7.5	5	0.5	9.0
Denzel Mims	NYJ	4.5	2	1.0	7.0
Rashard Higgins	CLE	4.5	3	0.5	6.0
Chris Conley	JAX	3.0	2	0.5	4.5

# Tell the story

Data behind the weighted recommendations tells the story for team 4

🔍 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters





Fantasy Team Code: Team 4

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼
Davante Adams	GB	7.5	5	2.0	13.5
Adam Thielen	MIN	7.5	4	2.0	13.0
Diontae Johnson	PIT	6.0	4	2.0	12.0
Larry Fitzgerald	ARI	3.0	5	1.5	9.0
Tyler Lockett	SEA	7.5	5	0.5	9.0
Steven Sims	WAS	4.5	2	0.5	5.5

# Tell the story

## Narrate

Prepare Visualize Narrate Save ▼

    Present

---

QB Cluster, Opponent Clusters, Sum of clusters

	QB Cluster	Opponent Clusters	Sum of clusters
	3	3	12
	2	2	11
	4	4	10
	3	4	9

Team 1: Choosing Brown over Higgins and Fulgham because of QB play.

## Present mode

45



# Tell the story

## Export

Overview of Data

Player, Team Code, Opponent Team Code, Player Clusters, Player QB Cluster

Fantasy Team Code: Team 1

Player	Team Code	Opponent Team Code	Player Clusters	Player QB Cluster
JuJu Smith-Schuster	PIT	JAX	4	
Nelson Agholor	LV	KC	4	
Antonio Brown	TB	LAS	3	
Tee Higgins	CIN	WAS	4	
Travis Fulgham	PHI	CLE	4	
Antonio Callaway	MIA	DEN	1	

Team 1: Choosing Brown over Higgins and Fulgham

Player, Team Code, Opponent Team Code, Player Clusters, Player QB Cluster

Fantasy Team Code: Team 3

Player	Team Code	Opponent Team Code	Player Clusters	Player QB Cluster	Opponent Clusters	Sum of clusters
Jerry Jeudy	DEN	MIA	4			
Tyler Lockett	SEA	ARI	5			
Tee Higgins	CIN	WAS	4	4	2	10
Denzel Mims	NYJ	LAC	3	2	2	7
Rashard Higgins	CLE	PHI	3	3	1	7
Chris Conley	JAX	PIT	2	2	1	5

File

NameNFL Fantasy Combined Clusters

FormatPowerpoint (pptx)

IncludePowerpoint (pptx)

SizeAcrobat (pdf)

OrientationImage (png)

Package (dva)

SaveCancel

Team Code, Player Clusters, Player QB Cluster, Opponent Clusters, Sum of clusters

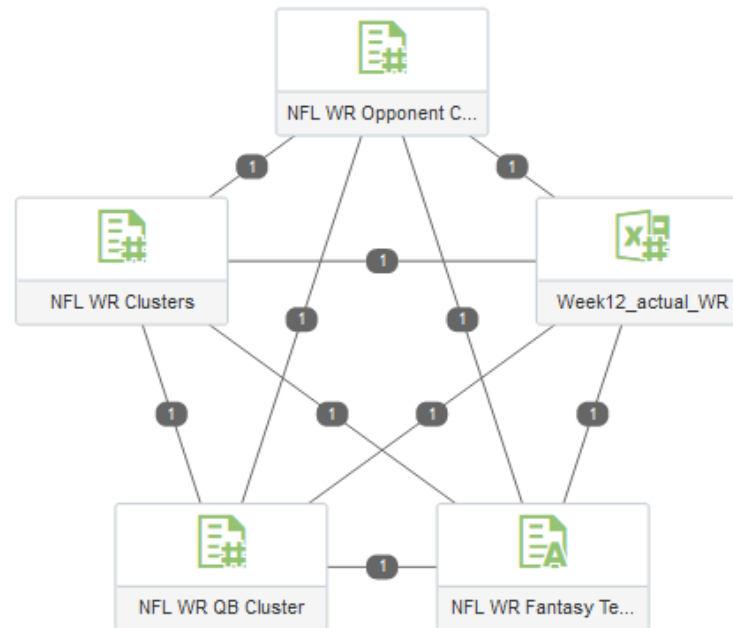
Team Code	Player Clusters	Player QB Cluster	Opponent Clusters	Sum of clusters
BAL	5	4	3	12
NO	5	4	2	11
IND	1	5	4	10
GB	2	3	4	9
DET	4	1	3	8
DEN	1	3	1	5

Team Code, Player Clusters, Player QB Cluster, Opponent Clusters, Sum of clusters

Opponent Team Code	Player Clusters	Player QB Cluster	Opponent Clusters	Sum of clusters		
IND	5	5	4	14		
DAL	5	4	4	13		
Diontae Johnson	PIT	JAX	4	12		
Tyler Lockett	SEA	ARI	5	11		
Larry Fitzgerald	ARI	SEA	2	10		
Steven Sims	WAS	CIN	3	2	1	6

# Actual

Import week 12 player points



# Actuals

## Team 1

🔍 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters, Pts

Fantasy Team Code: Team 1

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼	Pts
JuJu Smith-Schuster	PIT	6.0	4	2.0	12.0	9
Nelson Agholor	LV	6.0	4	2.0	12.0	5
Tee Higgins	CIN	6.0	4	1.0	9.0	10
Travis Fulgham	PHI	6.0	4	1.0	9.0	1
Antonio Brown	TB	4.5	5	1.0	8.5	1
Antonio Callaway	MIA	1.5	3	0.5	4.0	0

# Actuals

## Team 2

🔍 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters, Pts

Fantasy Team Code: Team 2

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼	Pts
A.J. Brown	TEN	7.5	4	1.5	11.5	15
Calvin Ridley	ATL	7.5	4	1.0	10.0	11
Equanimeous St. Brown	GB	1.5	5	2.0	9.5	3
T.Y. Hilton	IND	3.0	3	2.0	9.5	14
D.J. Moore	CAR	6.0	1	1.5	9.0	6
Antonio Callaway	MIA	1.5	3	0.5	4.0	0

# Actuals

## Team 3

 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters, Pts

Fantasy Team Code: Team 3

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼	Pts
Jerry Jeudy	DEN	6.0	3	2.0	11.5	15
Tee Higgins	CIN	6.0	4	1.0	9.0	10
Tyler Lockett	SEA	7.5	5	0.5	9.0	2
Denzel Mims	NYJ	4.5	2	1.0	7.0	6
Rashard Higgins	CLE	4.5	3	0.5	6.0	1
Chris Conley	JAX	3.0	2	0.5	4.5	0

# Actuals

## Team 4

🔍 Player, Team Code, Player Cluster Weighted, Player QB Cluster, Opponet Cluster Weighted, Weighted Sum of Clusters, Pts

Fantasy Team Code: Team 4

Player	Team Code	Player Cluster Weighted	Player QB Cluster	Opponet Cluster Weighted	Weighted Sum of Clusters ▼	Pts
Davante Adams	GB	7.5	5	2.0	13.5	12
Adam Thielen	MIN	7.5	4	2.0	13.0	5
Diontae Johnson	PIT	6.0	4	2.0	12.0	4
Larry Fitzgerald	ARI	3.0	5	1.5	9.0	2
Tyler Lockett	SEA	7.5	5	0.5	9.0	2
Steven Sims	WAS	4.5	2	0.5	5.5	0



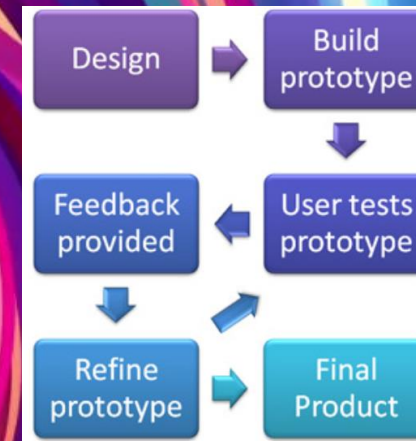
# Our goal in this presentation

Illustrate techniques to curate data from multiple sources and create a robust decision support tool with OAC/OAS

- Blend aspects of classic and modern analytics
- Generate and Import datasets
- Explore data for hidden insights using add Statistics
  - Reference lines
  - Trends
  - Clusters and Outliers
- Use Case: NFL Fantasy Team Decision Support



# Combine classic and modern flows



# Moving Forward



# Questions?

# Oracle Analytics Server helpful links

- **Oracle Analytics Server Doc**

<https://docs.oracle.com/en/middleware/bi/analytics-server/user-oas/introduction-visualization-and-reporting-oracle-analytics-server.html>

- **Oracle Analytics Server Reference:**

<https://docs.oracle.com/en/middleware/bi/analytics-server/user-oas/part-reference.html>

- **Oracle Analytics Server Tutorials**

<https://docs.oracle.com/en/middleware/bi/analytics-server/tutorials.html>

- **Oracle Analytics Cloud Examples:**

<https://www.oracle.com/solutions/business-analytics/data-visualization/examples.html>



# Helpful Links – example {Speaker to fill in}

## ORACLE AUTONOMOUS CLOUD

<https://cloud.oracle.com/tryit>

## ORACLE AUTONOMOUS HANDS ON LAB FOR DEVELOPERS

<https://go.oracle.com/e/f2?LP=82486>

## ORACLE MACHINE LEARNING ON OTN

<https://www.oracle.com/technetwork/database/options/oml/overview/index.html>

## OML TUTORIALS

**Basic getting started:** <https://docs.oracle.com/en/cloud/paas/autonomous-data-warehouse-cloud/omlug/get-started-oracle-machine-learning.html#GUID-2AEC56A4-E751-48A3-AAA0-0659EDD639BA>

**Credit\_Scoring\_100K Targeting Top Customers:** <https://oracle.github.io/learning-library/workshops/adwc4dev/?version=Self-Guided&page=SG-intro.md&elqTrackId=e57daae9db8d44bfac4a9e6614175e5a&elqaid=82487&elqat=2&source=%3Aow%3Aip%3Acpo%3A%3A>

## ORACLE ANALYTICS CLOUD

**Examples:** <https://www.oracle.com/solutions/business-analytics/data-visualization/examples.html>