

# **Samsung Innovation Campus**

| Artificial Intelligence Course 402

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# Levels

For Marketing strategy

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To increase satisfaction of customer with the values software and stockholders with profit





01

# Introduction

What is FIFA world cup and how it is  
effect the marketing strategies



# Introduction

The **FIFA World Cup**, often simply called the **World Cup**, is an international association football competition contested by the **senior men's national teams** of the members of the **Fédération Internationale de Football Association (FIFA)**, the sport's global governing body. The championship has been awarded **every four years** since the inaugural tournament in **1930**, except in 1942 and 1946 when it was not held because of the Second World War. The current champions are France, who won their second title at the **2018** tournament in **Russia**.





# 02 Business Requirement

Clients needs and business problems  
and solutions

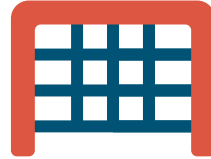


# Business Requirement



## EDA

Exploring data feature and how could be effect the ML model



## UI/UX

Helping customers to know about their teams and keep them update with news



## Predict winners

Train ML Model to predict winners to use them as marketing materials





03

# Methodology

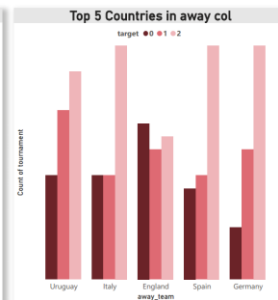
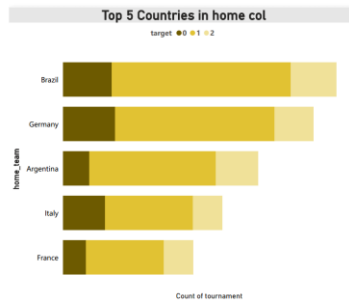
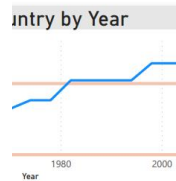
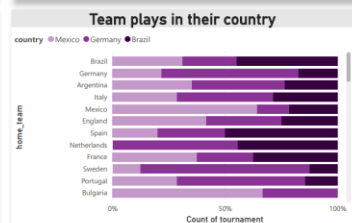
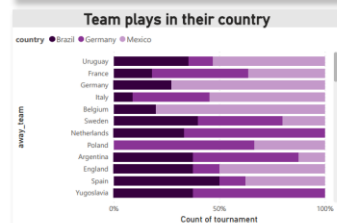
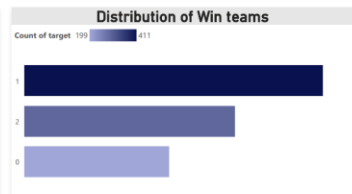
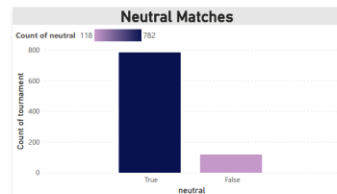
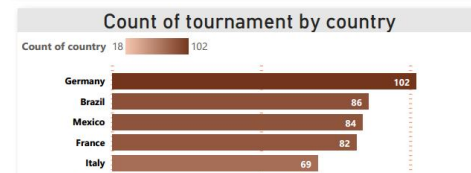
approach to reach the customer and  
satisfy business stockholders



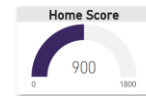


# Exploratory Data Analysis

## Business Questions



home_team	Count of home_score
Algeria	6
Angola	1
Argentina	60
Australia	6
Austria	20
Belgium	26
Bolivia	4
Bosnia and Herzegovina	1
Brazil	84
Bulgaria	13
Cameroun	11
Camrude	1
Chile	21
China PR	1
Colombia	11
Costa Rica	7
Croatia	6
Cuba	3
Czech Republic	2
Czechoslovakia	16
Denmark	9
DRC Congo	2
Ecuador	3
Egypt	2
Total	900



away_team	Count of away_score
Uruguay	37
Italy	34
England	33
Spain	33
Germany	32
Mexico	31
Russia	28
Vogoslavia	28
France	26
Sweden	26
Brazil	25
Switzerland	25
Netherlands	23
Belgium	22
Argentina	21
United States	20
Poland	19
Croatia	17
Hungary	17
Portugal	17
Paraguay	15
Czechoslovakia	14
Romania	14
Scotland	14
Total	900

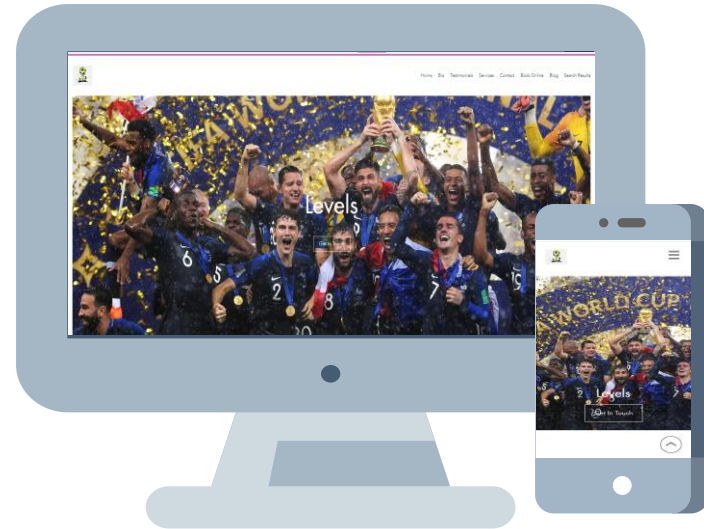
- an interactive graphs was made using Microsoft power Bi to be accessible and useful for stockholders to mentor the business work flow
- Answer most common business questions



# UI/UX platform

## Web Application

- Build a dynamic web application that help customers of our website to see the updated news about their favorite teams
- Help clients to watch live matches with paid subscriptions and highlights.
- Demo website:  
<https://editor.wix.com/html/editor/web/renderer/edit/45fe62bd-c2f1-4fac-8f91-2be6f035e1bf/?metaSiteId=273faa19-3012-4862-861a-76d156682a82&address=&businessFirstFlow=true&businessName=Levels&email=&industryId=f9d1880b41b5c94f5f400542&phoneNumber=&siteCreationWizard=true&structureId=61712509276d2b00161abef>



# Winners prediction

## Machine Learning Model

See who will win

Team 1

Germany

Team 2

United States

Neutral

True

Country will play on it

Japan

### Levels Company

#### For Marketing strategies

The 2022 *FIFA World Cup* is scheduled to be the 22nd running of the FIFA World Cup competition, the quadrennial international men's football championship contested by the senior national teams of the member associations of FIFA. It is scheduled to take place in **Qatar** from **20 November to 18 December 2022**.

#### previous Matches

	Unnamed: 0	date	home_team	away_team	home_score	away_score	tournament	city
890	40287	2018-07-03	Sweden	Switzerland	1.0000	0.0000	FIFA World Cup	Saint f
891	40288	2018-07-03	Colombia	England	1.0000	1.0000	FIFA World Cup	Mosco
892	40290	2018-07-06	Uruguay	France	0.0000	2.0000	FIFA World Cup	Nizhny
893	40291	2018-07-06	Brazil	Belgium	1.0000	2.0000	FIFA World Cup	Kazan
894	40292	2018-07-07	Sweden	England	0.0000	2.0000	FIFA World Cup	Samar
895	40293	2018-07-07	Russia	Croatia	2.0000	2.0000	FIFA World Cup	Sochi
896	40294	2018-07-10	France	Belgium	1.0000	0.0000	FIFA World Cup	Saint f
897	40295	2018-07-11	Croatia	England	2.0000	1.0000	FIFA World Cup	Mosco
898	40296	2018-07-14	Belgium	England	2.0000	0.0000	FIFA World Cup	Saint f
899	40297	2018-07-15	France	Croatia	4.0000	2.0000	FIFA World Cup	Mosco

### Prediction

Team 1

- Predict which of these teams are going to win the world cup. This prediction is going to make companies sponsors these teams by printing their logo on players' T-shirts, on banners





03

# Evaluation

evaluate user experience and  
validation machine learning models



# Test UI / UX

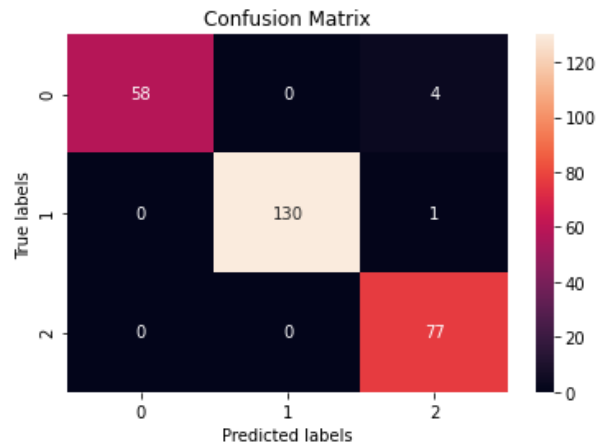
## Persona

- **Age:** 15 -> 55 Years old
- **Gender:** Both Gender
- **Location:** Around the world
- **Feedback:** Dynamic, colorful, meets user experience
- **Interests:** football, Sports, Health



# Winners Prediction

	precision	recall	f1-score	support
0	1.00	0.94	0.97	62
1	1.00	0.99	1.00	131
2	0.94	1.00	0.97	77
accuracy			0.98	270
macro avg	0.98	0.98	0.98	270
weighted avg	0.98	0.98	0.98	270



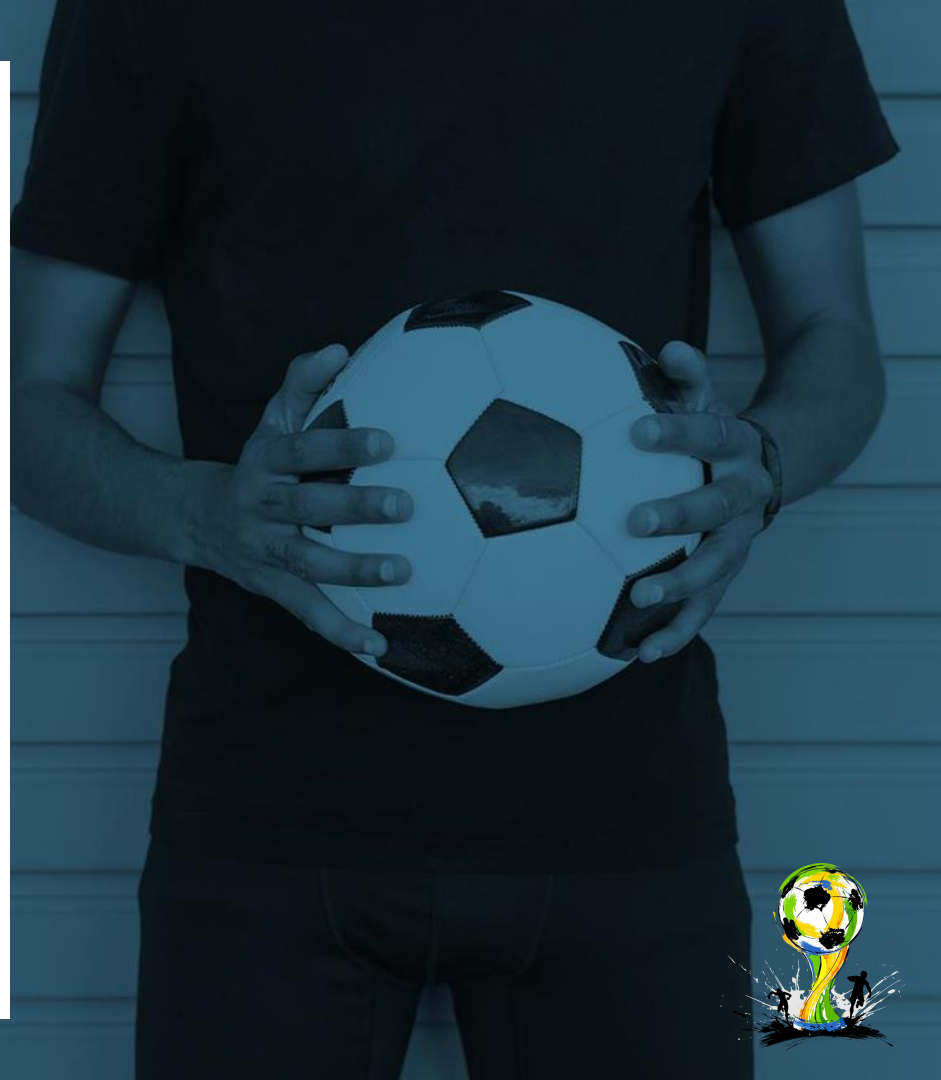
- After testing a lot of Machine learning models, Decision Tree Classifier is selected to be the implemented model to predict the winners

- **Train Accuracy: 99.5%**
- **Test Accuracy: 98.1%**



# Conclusion

- “Levels” had done its demo for the web application using streamlit with interactive data analysis dashboard made by Microsoft Power Bi and Train Decision Tree Classifier Machine Learning model to predict who is the winner country.
- Finally, “Levels” Company complete almost 80% of its deployment and this webpage is going to lunch by the end of 2022.



# Future Recommendation



Another Machine Learning model that predict how many goals will scored each match

Levels web application will be able also to predict different types of matches not only FIFA World Cup





# THANKS!

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