

XTREME F1

*One stop portal
for all F1 fans, sponsors and community*

2010

MIS 510-001 PROJECT REPORT



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1. INTRODUCTION

Formula One, also known as Formula 1 or F1, and currently officially referred to as the FIA Formula One World Championship, is the highest class of auto racing sanctioned by the Fédération Internationale de l'Automobile (FIA). The "formula" in the name refers to a set of rules to which all participants and cars must comply. The F1 season consists of a series of races, known as Grand Prix, held on purpose-built circuits, and to a lesser extent, former public roads and closed city streets. The results of each race are combined to determine two annual World Championships, one for the drivers and one for the constructors, with racing drivers, constructor teams, track officials, organizers, and circuits required to be holders of valid Super Licenses, the highest class racing license issued by the FIA.

The purpose of this project is to provide in depth information about F1 racing which serves as a central repository for F1 fans. XTREME F1 incorporates following:

1. F1 news, trivia and Track Locator
2. Player profiles and team information, recent upcoming events, pictures, videos.
3. Upcoming events, race track details, weather information
4. One stop shop for all F1 associated products and apparels
5. Social Discussion Forum, updates from different Social Networking websites and blogs.
6. Predict Race Outcomes for 2011 Season
7. Information about Travel and Stay for different tracks.



2. BUSINESS MODEL

1. One stop portal for all F1 Fans which includes:
 - a. F1 News, Images, Trivia, Games, Videos
 - b. Player, Team and Track Profiles
 - c. Upcoming Season Races, Discussion Forums
 - d. One stop shop for F1 associated products
 - e. Prediction System: Predict Race Outcome
2. Minimize Project Cost by using external API's
3. Prediction System will help viewers anticipate Team and Player performance
4. Incorporate a Social Media component for F1 fans to exchange views

2.1 Competitor Analysis

1. Formula F1- The Official F1™ Website








Link: <http://www.formula1.com>

This site provides all the information related to F1 such as news, Races, Results of the races, Galleries and videos, information about the sport and a store that sells F1 apparel. It also provides timing, weather and lap chart information. This site lacks the capability to watch the season live and the ability to predict results for future matches. It also lacks the provision of a Discussion forum for the F1 fans to discuss and share their views.

2. PlanetF1.com

Link: <http://planetf1.com/>

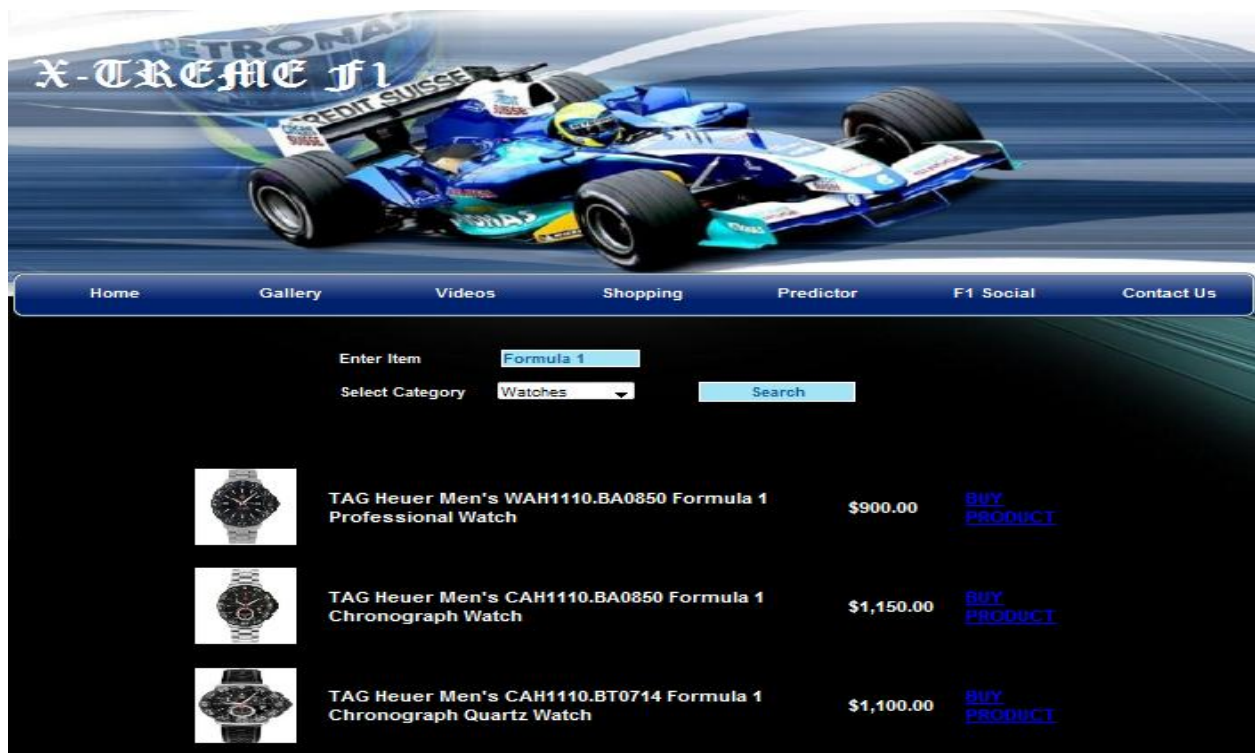
This site provides information about news and photos for F1. In 2009 it saw the launch of GPUUpdate TV; the video channel allows fans to get closer to the action with both previews and reaction of F1 races and off-season catch-ups plus race footage of the A1 Grand Prix and IndyCar Series. This site is not as comprehensive as the above site nor does it provide any videos or team or drivers information.

Features	Formula 1.com	Planet F1.com	Xtreme F1
Information about Races and Players			
Images , Video and Shopping		Shopping N/A	
Travel and Races Information			
Prediction about future Games			

Compare Player Performance			✓
Social Forums		✓	✓
Flexibility to Search based on your choice		✓	✓

2.2 Revenue Model

XTREME F1 can be extremely useful at a commercial platform after tie up with AMAZON after its API implementation and through the betting functionality. Amazon shares a percentage of their revenue earned through sale of products from XTREME F1. Betting through XTREME F1 would also give us a percentage of amounts both from the bettor and the betting host.



3 TARGET AUDIENCE

Commercial Markets are dynamic and fragile. In order to gain maximum out of what we have in this application, we have segmented the market and have targeted focused customer groups. Following provides a brief description about how this web application serves these focused customer groups. A language translation feature has been used to in order to provide ease of use for people from different regions.



3.1 Formula 1 Fans

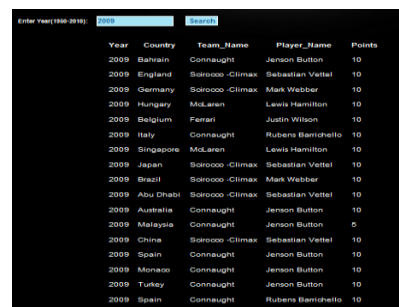
An F1 fan primarily wants to know about the upcoming events. We have incorporated upcoming events on our homepage. Supplementary needs of an F1 fan would be to view player/team profiles/season results for a specific season. We have provided links on our home page in order to access these aspects.



TEAM INFO.

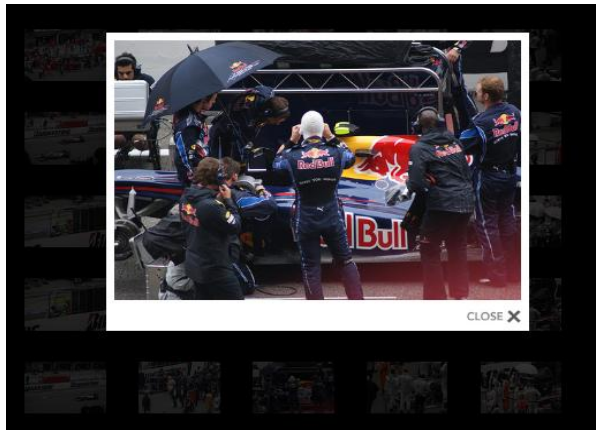


PLAYER INFO.

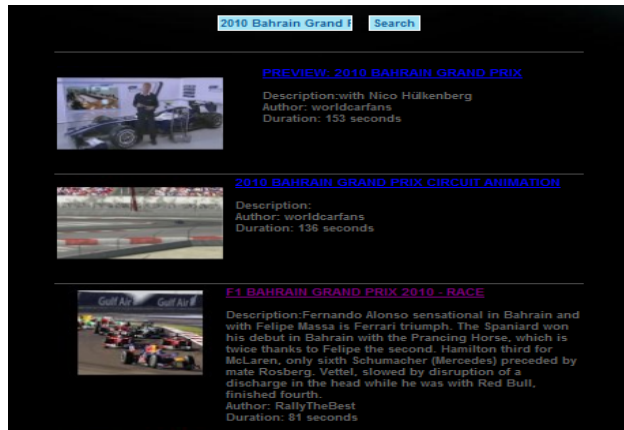


SEASON INFO.

If a Player wants to view an image or a video of a specific event or player or a team then the can browse through the Gallery or Videos tab and search for respective videos and images.

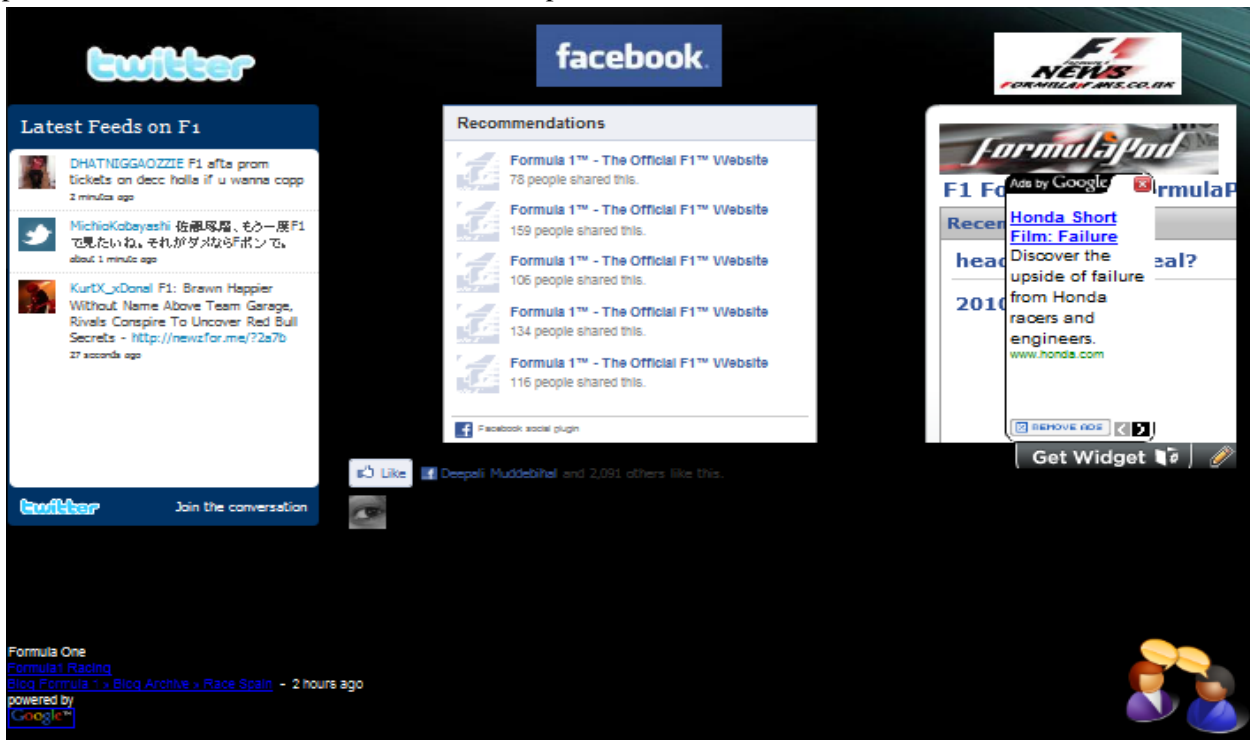


IMAGES



VIDEOS

Also, the player can search for any products based on F1 as we have seen in the Revenue Model. To provide room for discussion for these fans, we have incorporated a social discussion media tab which comprises of information from many Social networking websites like blogger, twitter, facebook, formula pod and a standalone discussion forum is also provided.



SOCIAL NETWORKING MODEL

If the fan or any other user as any problem with the web application, then the webmaster can be contacted through the CONTACT US tab.

To :

From : (Your Email)

Subject :

Message :

3.2 Sponsors/Coaches/ Betting Community

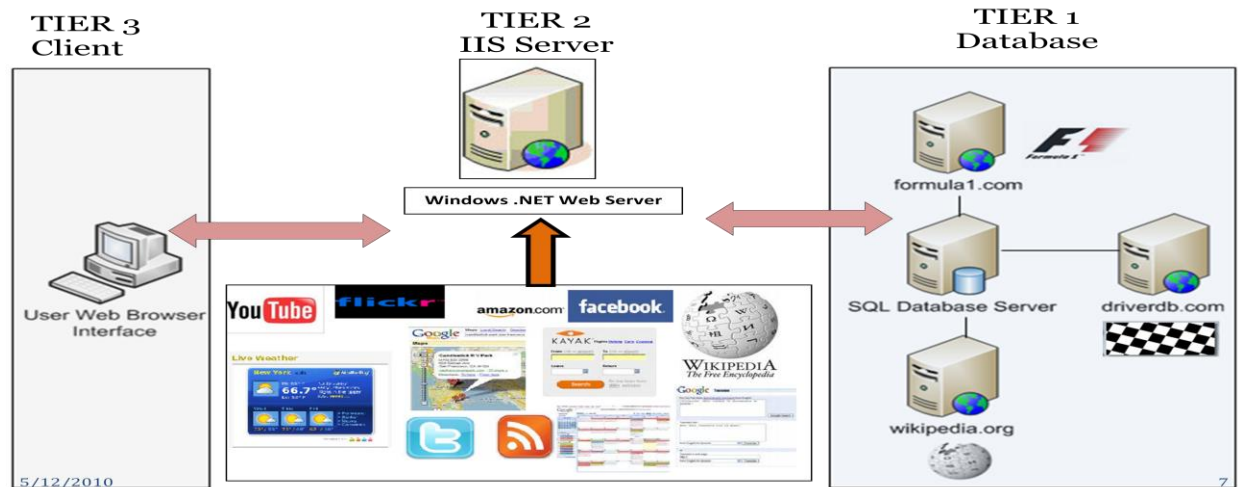
From the perspective of the above audience, a sponsor /coach / bettor is interested in knowing the player performance and statistics over time in order to make a decision as to who he wants to invest his money on. The website has the functionality of comparing player performance through Dashboards that compares some key metrics of the players such as:

- Number of Race Wins
- Wins from First Row
- World Championships
- Wins From Pole



Based on the above visual the above audience can make a more informed decision about who the most popular and well performing players are. To change the players being compared, we can use the drop downs present at the top of the page and change the players selected.

4 ARCHITECTURE



The system architecture is composed of three tiers, which are as follows:

1. Database

The web application basically pulls all the data from the SQL Server Database. This is specific to the player, team and season results information. Some of the information pertaining to the tracks, such as the track information comes from Wikipedia. The information stored in the database was stored using methods, viz. parsing and Spidering; while some of the entries were manually entered into the database.

2. IIS server

The pages for the website were served by the Windows .NET Web Server IIS. These pages rendered had both database components and API components. Following are some of the APIs that we used in our website.

- a. Amazon
- b. Google Maps and Wikipedia
- c. Google Translate
- d. Google Calendar
- e. Weather Bug
- f. Kayak Flight information
- g. Flickr
- h. YouTube
- i. RSS Feeds (taken from gpupdate.com)
- j. Twitter and Facebook

In addition to these APIs and RSS feeds, the website also has a forum, wherein fans can discuss about the various issues and hot topics in the world of F1.

3. Client

The client typically is a browser through which you can access the website.

5 NOVELTY

Some of the unique components that the web application has to offer are the revenue model which is through Amazon, the social networking model which consists of features for interaction amongst the various F1 fans; it includes social components like Facebook and Twitter, as also forums for discussion of topics. These models are described below.

5.1 Social Networking Model

The web application has a strong social networking component associated with it. The fans can interact with other fans around the world using different social media components. The fans can get an idea of what is hot in the world of F1 through the different tweets on twitter. They can join in and share their opinions. Also the forum built within the website can be used as means of communicating and reaching out to the fans around the world. The users can discuss about the topics such as the latest happenings in the world of F1, upcoming races, etc. In addition to these forums and tweets, the users can get information about various blogs related to F1 and can get to know more information.



The screenshot shows the 'Xtreme F1 Home Page' forum interface. At the top, there is a navigation bar with links for 'All Forums', 'Login', 'Online', 'Search', 'Rating', 'Register', and 'Control Panel'. Below this, it displays 'Online 1, Members:1, Guests:0' and a 'Show Detail' checkbox. The main content area is a table with columns for '# Forum Name'. It lists three forum groups: 'Group1 - Test Group1' containing 'Test1' (Test Forum 1) and 'Test2' (Test Forum 2), and 'Group2 - Test Group2' containing 'Test3' (Test Forum 3). At the bottom, there is a 'Forum Information' section stating: 'Currently it is Wednesday, 12 May 2010 20:06:34', '4 users have contributed to 3 threads and 7 posts', 'Most Active Threads in the last 3 days :', 'Most Active Users in the last 3 days :', and 'Welcome our new member : Vince-Laptop\Vince'.






DISCUSSION FORUM

5.2 Predictor Model for Betting Market

The predictor component associated with the website can be a useful source of information for people in the betting market. If the person is interested to know if a certain driver will do well in the upcoming race, he/she can get to know his performance so far and based on this data, he can decide if he actually wants to bet on this player. If the user is interested to know and bet on player, given a specific track, he can do so as well and get an idea of how the driver has been performing on that particular track and then base his decision of betting.


Prediction Results - 2011

Enter Track Name Enter Player Name

	Michael Schumacher 1
	Giancarlo Fisichella 2
	Jarno Trulli 3
	Rubens Barrichello 4
	Luca Badoer 5

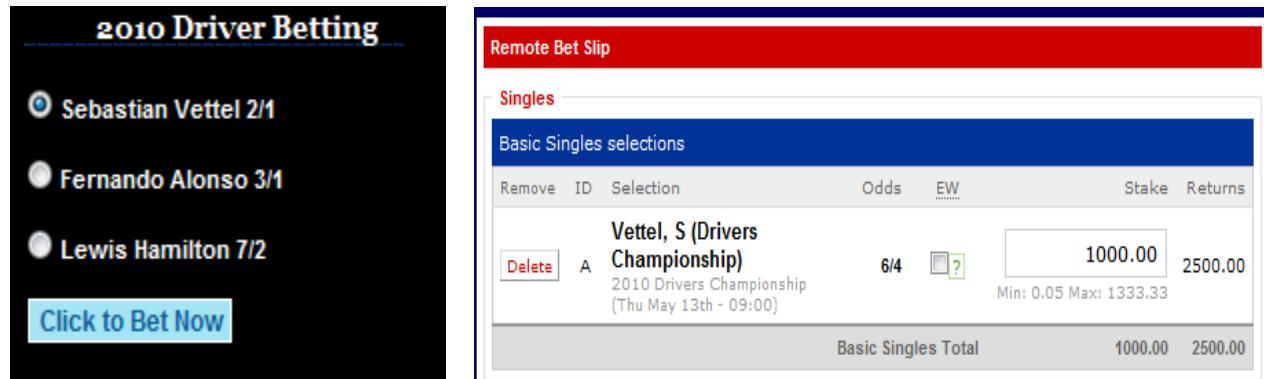
Prediction Results - 2011

Enter Track Name Enter Player Name

	Fernando Alonso 9
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5.3 Betting Model

People can place their bets through skybet which has been incorporated in the home page of the web application.



The image shows two side-by-side screenshots from a betting application. The left screenshot is titled "2010 Driver Betting" and lists three drivers with their odds: Sebastian Vettel 2/1, Fernando Alonso 3/1, and Lewis Hamilton 7/2. A "Click to Bet Now" button is at the bottom. The right screenshot is titled "Remote Bet Slip" and shows a "Singles" bet slip for "Vettel, S (Drivers Championship)" with odds of 6/4. The stake is 1000.00 and the returns are 2500.00. The event is the "2010 Drivers Championship" on "Thu May 13th - 09:00". A "Basic Singles Total" row shows a stake of 1000.00 and returns of 2500.00.

6 DATA MINING COMPONENT FOR PREDICTION

6.1 Microsoft SQL Server 2008 Data Mining Platform

Microsoft SQL Server 2008 empowers informed decisions with predictive analysis through intuitive data mining — seamlessly integrated within the Microsoft Business Intelligence platform and extensible into business applications. Some key features of the platform are as follows:

- Test multiple data mining models simultaneously with statistical scores of error and accuracy and confirm their stability with cross validation
- Build multiple, incompatible mining models within a single structure; apply model analysis over filtered data; query against structure data to present complete information, all enabled by enhanced mining structures
- Predict results and learn how they are interrelated to foresee bottlenecks and improve performance

6.2 Microsoft Neural Networks Algorithm

In SQL Server Analysis Services, the Microsoft Neural Network algorithm combines each possible state of the input attribute with each possible state of the predictable attribute, and uses the training data to calculate probabilities. One can later use these probabilities for classification or regression, and to predict an outcome of the predicted attribute, based on the input attributes.

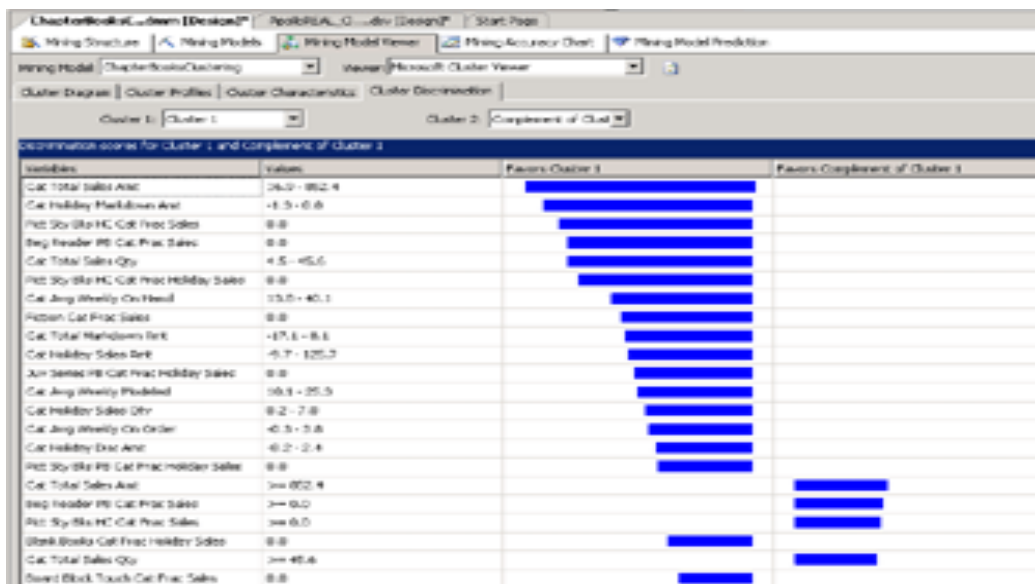
Player performance data from the past 20 years was used for the model. The input attributes to the model were as follows:

- **Driver Name** : Name of the Driver
- **Track Name** : Name of the Track on which the race is played
- **Grid Position**: The position from where the driver starts the race

- **Points Scored:** Points scored on the race based on his result
- **Races Participated:** Number of races the player has participated in
- **Race Wins :** Number of races the player has won
- **Active Years:** Number of years the player has been racing
- **Races with the Fastest Laps:** Number of races in which he completed with the fastest lap
- **Wins from Pole:** Number of wins from the pole
- **Wins from the First Row:** Number of wins from the first row (1st, 2nd or 3rd position)
- **Podiums from the Pole:** Number of podiums (1st, 2nd or 3rd) from the pole
- **Podiums from the First Row:** Number of podiums (1st, 2nd or 3rd) from the first row
- **Average Rank:** Average rank based on driver performance for the past 20 years

33% of the data fed to the model was for training. 20 years past performance data were used and the model delivered an accuracy of 63.5%. The inputs are fed into the Neural Network model and the results generated are exported to an SSIS package which in turn is stored in a database. The user can input the Driver name and the Track Name to find out the prediction for the Race result in 2011 for that particular player.

The user can also input just the Track Name to see the results of the top 10 players for 2011 on that track.



7. CONCLUSION

This web application serves as a one stop shop for all the users and F1 fans who want to know all about F1 events, weather details, F1 related products and news, Recommendations for F1 games and results. This application is not just beneficial to the user community but also to newbie's, sponsors, organizers and players.

8. APPENDIX

8.1 PROJECT TIMELINE

