User’s Documentation

*User’s Documentation of the program Mock Football Bets for a class*

*Semestral Project (NPRG045) at*[*MFF UK*](http://www.mff.cuni.cz/to.en)*.*

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Date of issue: 23/09/2021

# Short description of the project

Mock Football Bets is a web application which serves as an assistance for football bets. Within the application there is no real money involved, an user can make use of the virtual currency and place the bets as if they were real. Primarily, it is meant as a training platform. Furthermore, there are 3 modes where 2 of which utilize machine learning:

- **Classic Mode** - beforementioned mock bets

- **Assist Mode** - for the displayed bets, the application highlights the predicted result for a particular match

- **Auto Mode** - after specifying constraints on the machine in this mode (more in the section auto mode), the machine decides which matches should be chosen for a bet, how much money should be devoted to it and accomplishes bets itself.

Furthermore, an user can track his own bets history (including the bets accomplished by in the auto mode).

# How to use

## As an end user

- the application (for the rest of the document, let us assume that the web application is located on a website which can be visited by the end user, not only localhost as it is for now), it is demanded to use a modern browser and as soon the user enters the website, he should be navigated to further action

## Potential system administrator

- It is required to download **Python** version 3.8.5+ (the program was created with [Python 3.9.7](https://www.python.org/downloads/release/python-397/))

- Download **node.js** version 14+ (the program was created with node v14.17.0) - make sure node -v, especially **npm -v** works properly in the terminal

- In the root directory there are directories - windows, linux - firstly run the **install script** (.bat win, .sh linux) - in case of any inconvenience, the script is included here too:

pip install -r flask\_api/requirements.txt

npm install react --save

npm install react-dom --save

npm install react-router-dom --save

- Download **XAMPP** from https://www.apachefriends.org/download.html version 7.3.30+ and install it (within the installation you will be prompted to choose what from XAMPP you want to install - choose Apache, MySQL only, other features provided are not required) - after installation run XAMPP control panel and turn on Apache, MySQL on - by default should be on port 80, 3306 respectively

- Run **localhost/phpmyadmin** in your favourite browser

-- In the left sidebar you should be able to see premade databases - create there a database with name **mfb** - in the left panel you should see this database too

- Open mfb database - in the upper navigation panel you should see **Import** - make use of the file included in the root directory called **mfb.sql** to import tables required for this application - check that balance, bet and users tables are created

- All should be set up to make it start by running **run.sh or run.bat** script of your operating system

- Note that first launch takes a while since it has to download historic matches and prepare all models for machine learning part

- When it is all set up, to recognize that the users are placing bets use localhost/phpmyadmin and look into the table bet where should be only upcoming bets

- Note: procedure described below is used on localhost and credentials directory would not be visible to public, if the website was hosted somewhere (or if you want to host it yourself you shall create your own credentials/db.json file and use your own mail delivery service placed in credentials/email.json).

# Features - expected behavior

## Responsive design

- For devices with lower resolution there is a layout designed for it (when talking about columns/sidebars for lower resolution means that columns are displayed that the “leftmost“ is most on top)

- Description of upcoming features will be for larger resolution

## Login and registration

- Every user is required to register in order to use service of this web application

- After filling in the form, the user is asked to confirm registration via email entered

- When confirmed the user is redirected to login page

## Bets in general

- Properties which holds for all three modes

- Upcoming matches are displayed in the middle of the screen – every match involves its datetime, names of teams and their odds

- In the left sidebar there is implemented a filter where an user can choose which leagues to show, right below there is a search bar to find a concrete team’s matches

Classic bets

- In the right sidebar there is a form where an user fills in the amount of money he wants to spend on a particular – this process should precede a choice of a match in the middle of the screen

Assist mode

- Classic Bets with an additional feature, when an user moves the mouse over matches, one of the odds fields is highlighted which denotes the prediction of a machine learning model

Auto mode

- Auto Mode has a form in the right side of the screen, nevertheless, this form is devoted for constraining the machine (amount of money it has – it gets subtracted from user’s account, until when it should run, maximum odds it is allowed to accomplish a bet (the lower, the less risky option – team with lower odds coefficient e. g. 1.1 is considered to be a favorite in a particular match) and finally on the front end it is described as an amount of risk which says how many out of seven utilized machine learning models need to agree on a particular result

Profile

- Profile shows username, current balance, current auto mode situation (whether it is currently running how much money it currently possesses, until when it runs and a button for immediate termination which sends current balance of the machine to the user and all currently accomplished bets are overwritten as if they were made by the user

Hardware requirements

- For an end user, it is required to have such hardware to be able to run a reasonably modern browser with the website where the application resides.

- The application was built and launched using a device with the CPU: AMD Ryzen 7 4800H, RAM 16 GB, Windows 10 Home (64-bit) and on Intel Core i5-4200U, RAM 8 GB, Windows 10 Home (64-bit)