Dissertation Title:
Sports fantasy application

Course No. : SEZG628T

Course Title: Dissertation

Dissertation Done by:

Student Name: Jaspreet Singh

BITS ID: 2021MT93340

Degree Program: M.Tech Software Engineering

Research Area: Blockchain Technology

Dissertation carried out at:

New Delhi

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
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(01/2023)

Contents

1. Broad Area of Work

Blockchain Technology is a great way to ensure transparency and fairness in any game or software. The broad range of our project include Blockchain, Machine Learning, and Database design techniques. The current research project focus in the following application areas:

- Blockchain: To ensure transparency and fairness in reward distribution
- Machine learning: To adapt and detect new patterns
- Database design: To fetch cricket results from APIs and process them to store results in local DB.

2. Background

The blockchain technology is older than Bitcoin but it is the core component of it, acting as a decentralized, distributed and public digital ledger responsible for keeping a permanent record as a chain of blocks.

A Machine learning model is trained using a dataset that contains information as sample output data and the corresponding sets of input data that have an influence on the output. The training model is used to run the input data through the algorithm to correlate the processed output against the sample output and assign weights.

3. Objectives

The objectives of my project are as follows:

- Understand the current scenario in the market with respect to the sports fantasy applications.
- Designing the smart contracts in Solidity that uses sports APIs via oracles to fetch match scores of cricket and do the processing fairly.

- Building a mobile app in Flutter for cricket prediction questions and developing the APIs for fetching results.
- Prediction of results from a Machine learning trained model that uses track record of the past will be used to assign option's participation fees. More the participation fee, more should be the probability of that option to be correct.

4. Scope of Work

Scope of this dissertation is to develop smart contracts and mobile app that allows users to predict cricket match outcomes in form of simple question answers. The multiple options of question will have different participation fees based on Machine learning trained dataset.

5. Plan of Work

Phases	Start Date-End Date	Work to be done
Dissertation Outline	13 Jan 2023 – 21 Jan 2023	Literature Review and prepare Dissertation Outline
Design & Development	22 Jan 2023 – 15 Feb 2023	Design & Development Activity
Testing	16 Feb 2023 – 13 Mar 2023	Software Testing, User Evaluation & Conclusion
Dissertation Review	14 Mar 2023-25 Mar 2023	Submit Dissertation to Supervisor & Additional Examiner for review and feedback
Submission	26 Mar 2023-30 Mar 2023	Final Review and submission of Dissertation

6. Literature References

The following are referred journals from the preliminary literature review.

[1] *A. Gervais, G. O. Karame, K. Wust, V. Glykantzis, H. Ritzdorf and S. Capkun: "On the security and performance of proof of work blockchains". ACM SIGSACconference (2016).*

[2] *iI. C. Lin and T. C. Liao: "A Survey of Blockchain Security Issues and Challenges". IJ Network Security, 19(5), pp.653-659 (2017).*

[3] *LeCun, Y., Bengio, Y. & Hinton, G. Deep learning. Nature 521, 436–444 (2015).*

[4] *Types of Fantasy Sports Users and Their Motivations Lee K. Farquhar, Robert Meeds Journal of Computer-Mediated Communication, Volume 12, Issue 4, 1 July 2007, Pages 1208–1228*

[5] *Andrew C. Billings & Brody J. Ruihley (2013) Why We Watch, Why We Play: The Relationship Between Fantasy Sport and Fanship Motivations, Mass Communication and Society, 16:1, 5-25, DOI: 10.1080/15205436.2011.635260*

7. Particulars of the Supervisor and Examiner

	Supervisor	Additional Examiner
Name	Swati Chandak	Rohan Dhamija
Qualification	B.Tech	B.Tech
Designation	Senior Associate, Data Analytics	Senior Associate, Data Engineering
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8. Remarks of the Supervisor

The concept and initiative appear to have huge potential. The student covered every component of the crucial content analysis. The project justifies the level of research for master's studies while also holding the relevant area of research. The project's techniques have been found to be quite intriguing. Additionally, a user study of the functional prototype is part of the project. The research project is thoroughly validated by this action. Further publication of this project is also a possibility. After our first meeting, I had the feeling that the student was a diligent worker who had the necessary skills to carry out the experiment in accordance with the standard research paradigm. As the supervisor, I granted my approval to the proposed project.

BIRLA INSTITUTE OF TECHNOLOGY & SCIENCE, PILANI
WORK INTEGRATED LEARNING PROGRAMMES (WILP) DIVISION
SECOND SEMESTER OF ACADEMIC YEAR 2022-2023

(SEZG628T) : (DISSERTATION) OUTLINE

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DISSERTATION / PROJECT / PROJECT WORK TITLE	Sports Fantasy Application

Jaspreet Singh	*Swati Chandak*	*Rohan Dhamija*
Signature of Student	**Signature of Supervisor**	**Signature of Additional Examiner**
Name: Jaspreet Singh	**Name: Swati Chandak**	**Name: Rohan Dhamija**

Abstract Report for M.Tech dissertation

3 messages

JASPREET SINGH . <2021mt93340@wilp.bits-pilani.ac.in>   Tue, Jan 17, 2023 at 7:17 PM
To: swati.chandak@publicissapient.com, dhamija.rohan@gmail.com

Hi Swati & Rohan

I have completed writing the abstract for my dissertation after discussing with you.
PFA pdf for review and kindly accept & approve it by replying to this email for my submission if all is good.

Thanks & Regards
Jaspreet Singh

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Approved.

Thanks,
Swati

From: JASPREET SINGH . <2021mt93340@wilp.bits-pilani.ac.in>
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Good work Jaspreet.
Approved.

Thanks and Regards,
Rohan Dhamija

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