THE PREDICTION OF ATHLETES PERFORMANCE IN SPRINT EVENT USING CUMULATIVE DISTRIBUTION FUNCTION

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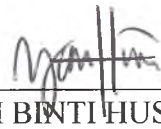
DECLARATION BY CANDIDATE

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the word of othe people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.



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ABSTRACT

Sprint event is one of the well-known track and field event in the world. Olympic Games are held every four years with The Summer and Winter Games alternating but two years separated while four years for Asian Games. Sprint athletes from both games aiming to be crowned as the world's best. But there is a small chance for an athlete from specific event to break the current Asian and world record. Therefore, the purpose of this project is to determine the rate of occurrence of world record to be broken. In this project, the method that will be use is cumulative distribution function which is one of the theory for probability distribution and statistics. First of all, construction of cumulative distribution function is essential to model the probability for an athlete to race within a certain range of times. After the parameter values for the model been estimated, the technique from probability theory will be used to determine the chance for an athlete to be able to break the current Asian and world record. The present study, the result will obtain the probability of a new record for Olympic and Asian sprinter in each specific event and the frequency of Asian or world record will be broken. Hence, the performance of Olympic and Asian athletes in sprinting can be compared.

TABLE OF CONTENT

		Page
DECLARATION BY THE SUPERVISOR		i
DECLARATION BY CANDIDATE		ii
ABSTRACT		iii
ACKNOWLEDGEMENT		iv
LIST OF TABLE		v
LIST OF FIGURE		viii
LIST OF ABBREVIATION AND SYMBOL		ix
1.	INTRODUCTION OF RESEARCH	
	1.1 Introduction	1
	1.2 Background of Study	1
	1.3 Problem Statement	3
	1.4 Objectives	4
	1.5 Significant of the Project	5
	1.6 Scope of the Project	5
	1.7 Project Benefits	6
	1.8 Organization of Project	7
2.	METHODOLOGY	
	2.1 Introduction	9
	2.2 Definition of Terms and Concepts	9
	2.3 Literature Review	11

2.4 Methodology 13

2.4.1 Distribution Function 13

2.4.2 Law of Total Probability and Binomial Coefficient 14

2.5 Conclusion 15

3. IMPLEMENTATION

3.1 Introduction 16

3.2 Research Data 16

3.3 Research Step 17

3.4 Conclusion 45

4. RESULT AND DISCUSSION

4.1 Introduction 46

4.2 Discussion of the Result 46

4.3 Result of the Probability of New Record using Model 1 For Olympic Games and Asian Games 47

4.4 Result of the Probability of New Record using Real Data For Olympic Games and Asian Games 49

4.5 Result of the Probability for the Number of Times of World and Asian Record To Be Broken For Model 1 51

4.6 Result of the Probability for the Number of Times of World and Asian Record To Be Broken For Real Data 53

4.7 Conclusion 58