



ANALYSIS OF IMPLEMENTING A SMART CONTRACT IN WHEATHER INSURANCE USING CHAINLINK ORACLES

BACHELOR THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE

AUTHOR

AEBERHARD ELIA ANDREAS

GMEINDHUSPLATZ 4 5223 RINIKEN

MATRICULATION NUMBER: 19-925-957

EMAIL: ELIA.AEBERHARD@UZH.CH

Supervisor
PROF. DR CLAUDIO J. TESSONE

BLOCKCHAIN & DISTRIBUTED LEDGER TECHNOLOGIES

DEPARTMENT OF INFORMATICS

UNIVERSITY OF ZURICH

DATE OF SUBMISSION: [DATE]

Executive Summary

Write this last. It is an overview of your whole thesis, and is between 200-300words.. . .

Contents

1	Intro	Introduction 1				
	1.1	Background	1			
		1.1.1 Traditional Wheather Insurance	1			
	1.2	Problem Statement	1			
	1.3	Objectives	1			
2	Lite	Literature Review				
	2.1	Traditional weather insurance process	2			
	2.2	Smart contracts in Insurance	2			
	2.3	Chainlink and Google Cloud Public Datasets	2			
	2.4	Regulatory and technical challenges	2			
3	Met	Methodology				
	3.1	Research Design	3			
	3.2	Data Collection	3			
	3.3	Prototype development	3			
4	Dev	relopment of the Prototype	4			
	4.1	Requirements	4			
	4.2	Inclusion of Chainlink and Google Cloud Public Datasets	4			
	4.3	Designing the architecture and the data flow	4			
5	Ana	alysis and Discussion	5			
	5.1	Technological and regulatory barriers of the prototype	5			
	5.2	Real-world application of the prototype	5			
	53	Analysis of smart contracts in the insurance industry	5			

CONTENTS							
6	Summary and Conclusion						
	6.1	Summary of findings	6				
	6.2	Conclusions	6				
	6.3	Future work	6				
Αį	open	dices					
A	App	endix title 1	8				

Introduction

Introduction text:

1.1 Background

In 2016, global disasters accounted for USD 175 billion in economic losses. USD 54 billion of these economic losses were insured, resulting in uninsured losses of USD 121 billion. These losses underscore the importance of wheather insurance in providing financial protection for individuals, business and governments (Swiss Re Institute 2017). For comparison, the international humanitarian assistance reached USD 28 billion in 2015, more than 4 times less than the unsinsured losses of 2016 (Initiatives 2016).

1.1.1 Traditional Wheather Insurance

1.2 Problem Statement

1.3 Objectives

Literature Review

- 2.1 Traditional weather insurance process
- 2.2 Smart contracts in Insurance
- 2.3 Chainlink and Google Cloud Public Datasets
- 2.4 Regulatory and technical challenges

Methodology

- 3.1 Research Design
- 3.2 Data Collection
- 3.3 Prototype development

Development of the Prototype

- 4.1 Requirements
- 4.2 Inclusion of Chainlink and Google Cloud Public Datasets
- 4.3 Designing the architecture and the data flow

Analysis and Discussion

- 5.1 Technological and regulatory barriers of the prototype
- 5.2 Real-world application of the prototype
- 5.3 Analysis of smart contracts in the insurance industry

Summary and Conclusion

- **6.1 Summary of findings**
- 6.2 Conclusions
- 6.3 Future work



Appendix A

Appendix title 1

Test appendix 1

Bibliography

Initiatives, Development (2016). *Global Humanitarian Assistance Report 2016*. Accessed: October 1, 2024. Development Initiatives.

Swiss Re Institute (2017). *Natural catastrophes and man-made disasters in 2016*. Sigma No. 2/2017. Accessed: October 1, 2024. Swiss Re.

Eidesstattliche Erklärung

Der/Die Verfasser/in erklärt an Eides statt, dass er/sie die vorliegende Arbeit selbständig, ohne
fremde Hilfe und ohne Benutzung anderer als die angegebenen Hilfsmittel angefertigt hat. Die
aus fremden Quellen (einschliesslich elektronischer Quellen) direkt oder indirekt übernommenen
Gedanken sind ausnahmslos als solche kenntlich gemacht. Die Arbeit ist in gleicher oder ähnlicher
Form oder auszugsweise im Rahmen einer anderen Prüfung noch nicht vorgelegt worden.

Ort, Datum	Unterschrift des/der Verfassers/in