

# SIGNIFICANTLY DECREASED THEIR FRAUD RATES (WESTERN UNION)

Route(s): Finance, Operations

Industry: Finance / Credit Companies

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## BUSINESS USE CASE

### DETERMINE TRANSACTION LEGITIMACY

#### A. DESCRIPTION

The use case describes how Western Union determines the legitimacy of a payment transaction using Cloudera's machine learning algorithm. It begins when a payer initiates a payment transaction and ends when Cloudera's algorithm determines the legitimacy of the transaction.

#### B. ACTORS

Primary Actor(s): Cloudera algorithm

Supporting Actor(s): Payer, Payment Engine

Offstage Actor(s): Transaction Monitor

## C. PRE-CONDITIONS + POST-CONDITIONS

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### PRE-CONDITIONS

1. *Transactional and behavioural data of payer exists*
2. *Cloudera is trained to identify and react to patterns in the data*
3. *Cloudera model is integrated with Payment Engine*

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### POST-CONDITIONS

*Cloudera is updated with the new data from suspicious transactions*

## D. MAIN SUCCESS SCENARIO

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### ACTOR INTENTION

1. *Payer initiates a payment transaction*
2. *Payment Engine routes transaction to Cloudera algorithm*
3. *Cloudera algorithm determines transaction legitimacy*
4. *Cloudera provides response to Transaction monitor*

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### SUCCESS SCENARIO

1. *Legitimacy of a transaction is determined*

## E. INDUSTRIES + FUNCTIONS

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### INDUSTRIES

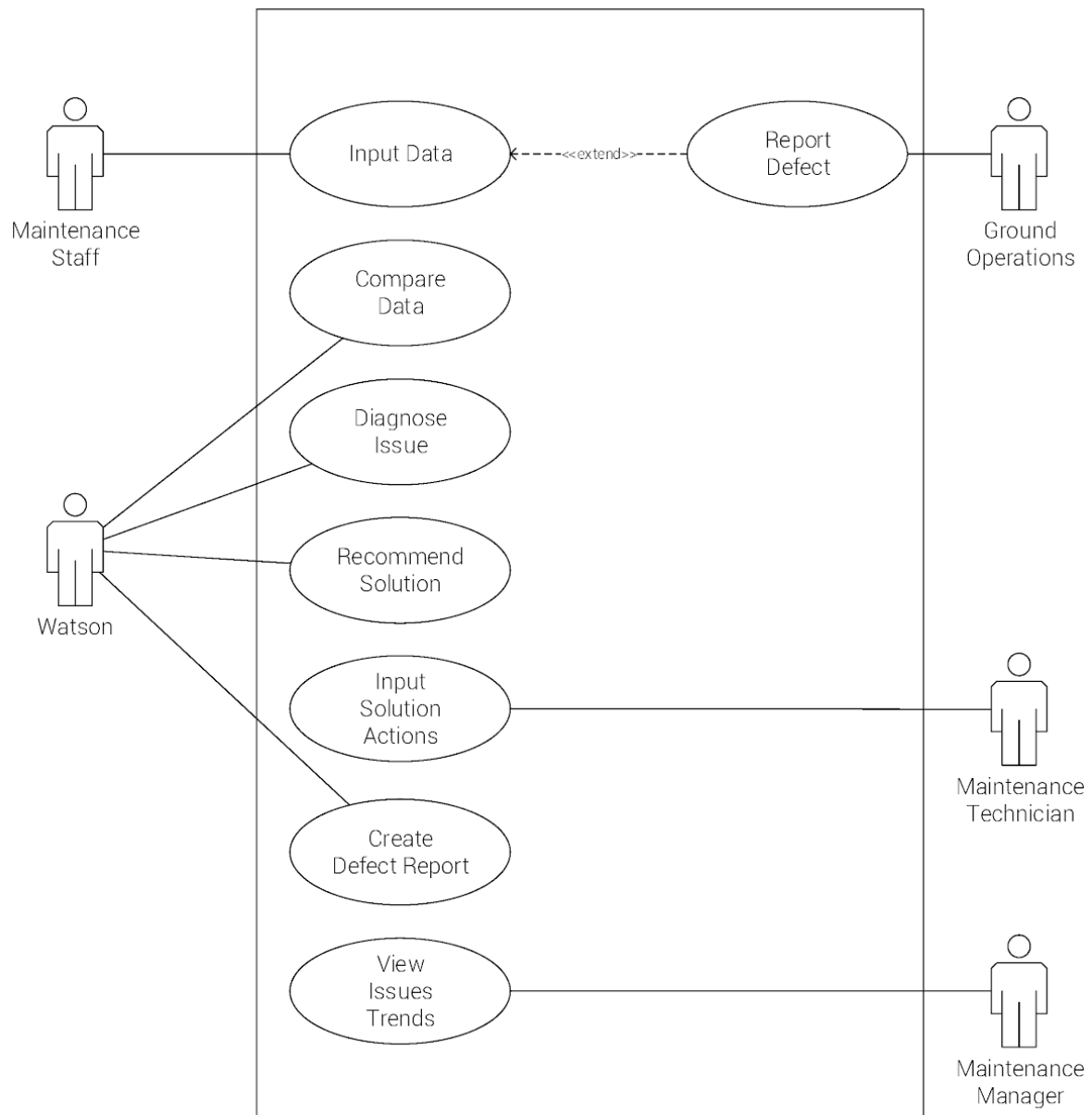
*Payment*

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### FUNCTIONS

*Fraud Monitoring*

## F. BUSINESS USE CASE DIAGRAM



## TECHNOLOGY SPECIFICATIONS

**Important note:** These specifications detail the data technologies this organization and/or vendors are publicly known to be utilizing. The technologies listed below are not meant to be a complete, exhaustive list of the technologies required to implement this use case. Furthermore, the technologies listed below may not in fact be relevant to implementing the exact use case at-hand. Caveat emptor.

<b>Technology Stack</b>	ON-PREMISE / CLOUD / HYBRID DATA MANAGEMENT
	Big Data <ul style="list-style-type: none"> <li><i>Docker</i></li> <li><i>Kubernetes</i></li> </ul>
	MACHINE LEARNING TECHNOLOGIES
	<ul style="list-style-type: none"> <li><b>PREDICTIVE MODELING PROGRAMMING LANGUAGES:</b> <i>Go, Python, R</i></li> <li><b>PREDICTIVE MODELING APPLICATIONS:</b> <i>Cloudera Data Science Workbench, H2O.ai, Jupyter Notebooks, R-Studio, SAS</i></li> </ul>
	SOFTWARE ENGINEERING TECHNOLOGIES <ul style="list-style-type: none"> <li><b>APPLICATION DEVELOPMENT PROGRAMMING LANGUAGES:</b> <i>C++, Java</i></li> </ul>
<b>Data Science Methodologies</b>	All
<b>Vendor</b>	Cloudera Data Science Workbench
<b>Main Integrations</b>	Statistical Analysis System (SAS) tools, Jupyter, RStudio, PyCharm, H2O.ai, Hadoop, Scala, Spark, Etc.