

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

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

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

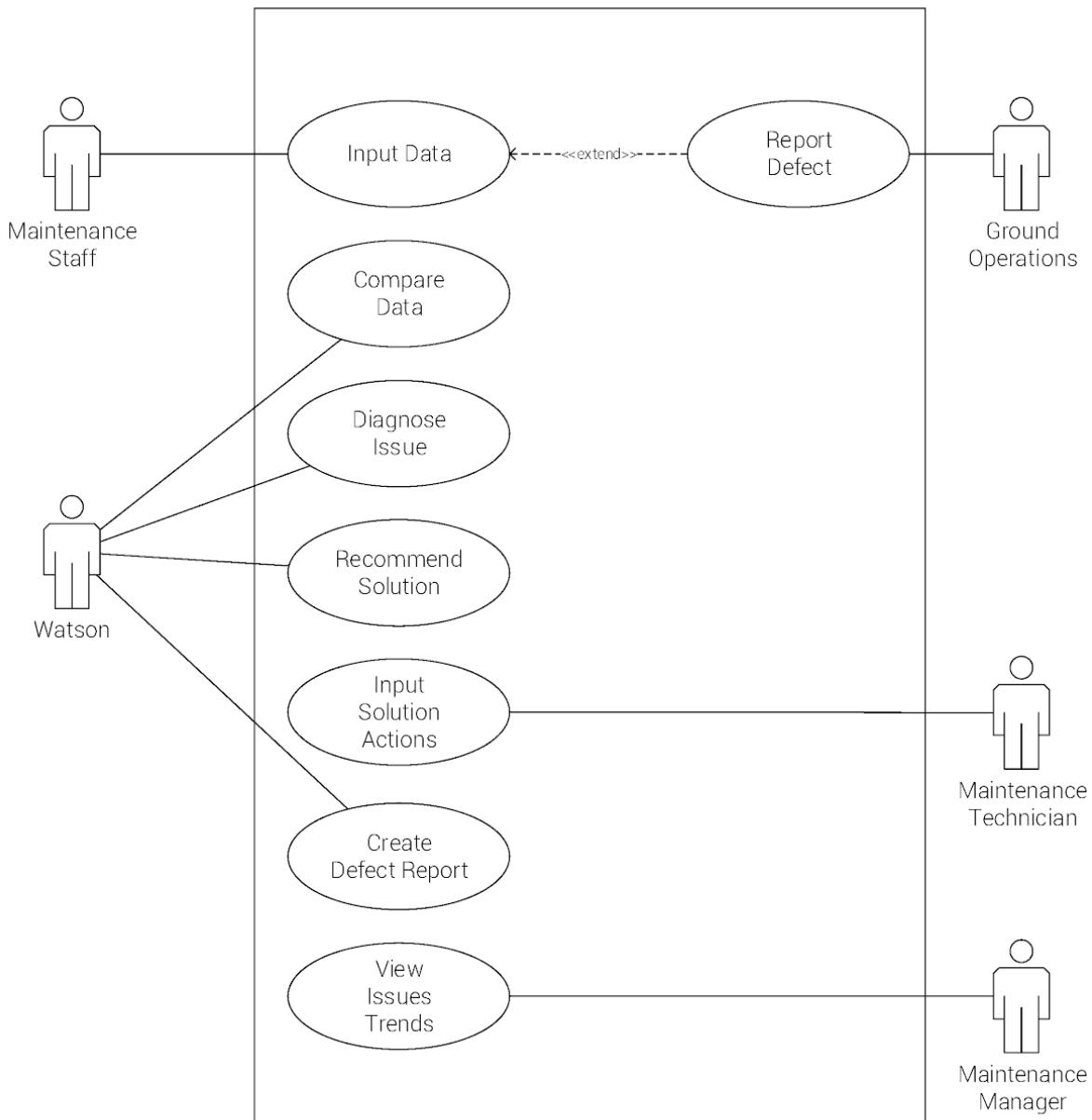
INDUSTRIES

Payment

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.

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