SIGNIFICANTLY DECREASED THEIR FRAUD RATES (WESTERN UNION)

Route(s): Finance, Operations

Industry: Finance / Credit Companies

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*

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*

SUCCESS SCENARIO

1. *Legitimacy of a transaction is determined*

E. INDUSTRIES + FUNCTIONS

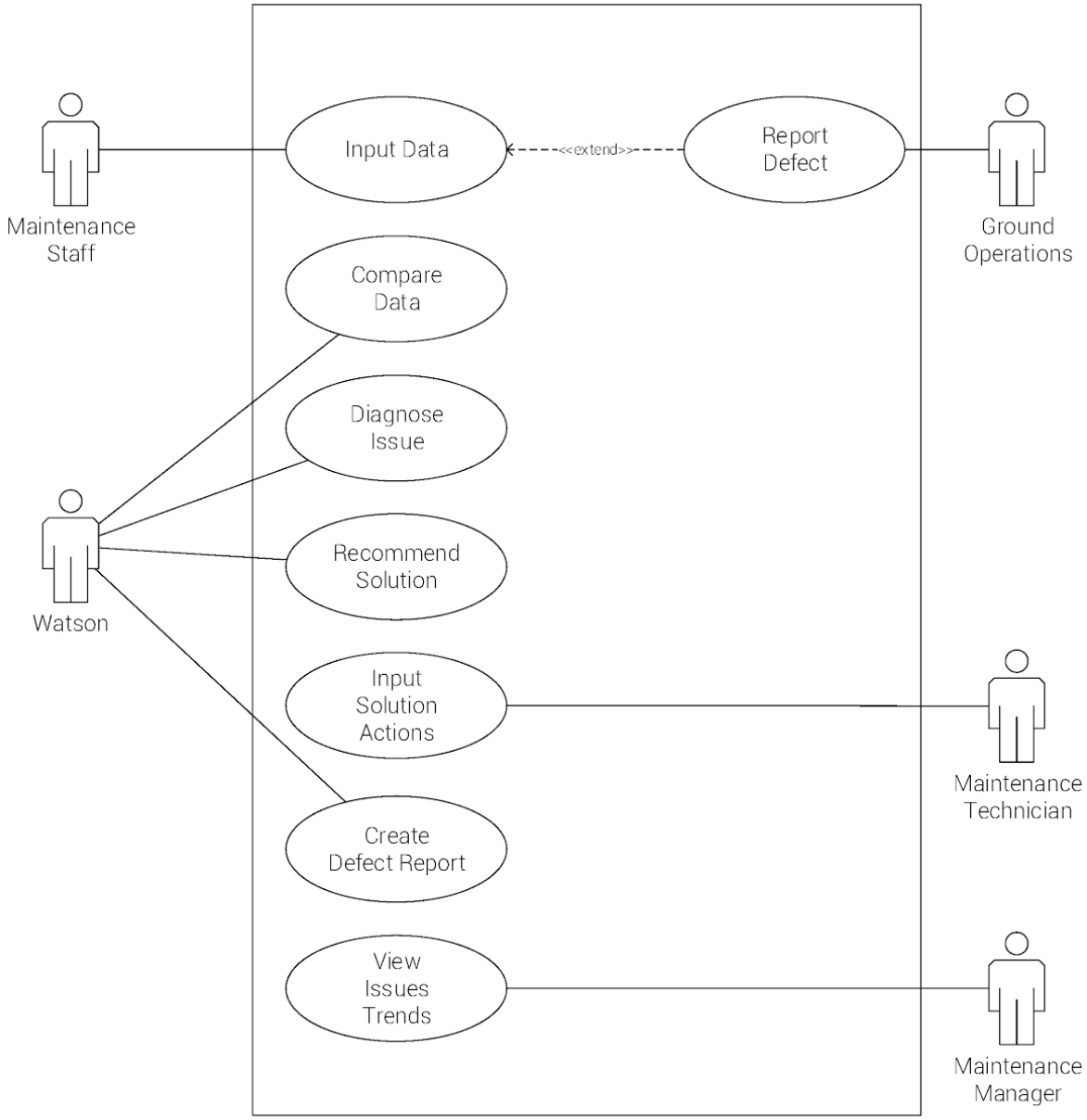
INDUSTRIES

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.

<table>
<tr><td>Technology Stack</td><td>
ON-PREMISE / CLOUD / HYBRID DATA MANAGEMENT
Big Data
Docker
Kubernetes
MACHINE LEARNING TECHNOLOGIES
PREDICTIVE MODELING PROGRAMMING LANGUAGES: Go, Python, R
PREDICTIVE MODELING APPLICATIONS: Cloudera Data Science Workbench, H2O.ai, Jupyter Notebooks, R-Studio, SAS
SOFTWARE ENGINEERING TECHNOLOGIES
APPLICATION DEVELOPMENT PROGRAMMING LANGUAGES: C++, Java
</td></tr>
<tr><td>Data Science Methodologies</td><td>All</td></tr>
<tr><td>Vendor</td><td>Cloudera Data Science Workbench</td></tr>
<tr><td>Main Integrations</td><td>Statistical Analysis System (SAS) tools, Jupyter, RStudio, PyCharm, H2O.ai, Hadoop, Scala, Spark, Etc.</td></tr>
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