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1st Deliverable: Survey of Al techniques candidates and existing work aiming at augmenting traceability awareness in MDE

Modelia

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# **CONTENTS**

### LIST OF ACRONYMS

MDE Model-driven Engineering

UML Unified Modeling Language

TIM Traceability Information Model

RE Requirement Engineering

Al Artificial Intelligence

ML Machine Learning

EA Evolutionary Algorithm

ANN Artificial Neural Network

NLP Natural Language Processing

VSM Vector Space Model

LSI Latent Semantic Indexing

LSTM Long Short-Term Memory

SOM Systems, Software and Models Lab

UOC Open University of Catalonia

CEA Commissariat à l'énergie atomique et aux énergie alternatives

#### 1 INTRODUCTION

The purpose of this report is to document the work done as part of the First Task described in the Convention de l'equipe de recherche commune. This document corresponds to Deliverable 1. The content of this document is a scientific report on the conjunct use of traceability, modelling, and AI, with a scrutiny on the potential such techniques could bring to AI-enabled system architecture.

The content of this document is a scientific submission in the form of the description of the state-of-the-art, a linguistic metamodel, and a feature model of traceability research and industrial applications.

### **2 TECHNICAL REPORT**

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