# The Collaborative Business Intelligence Ontology (CBIOnt)

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**Abstract.** In the current era, many disciplines are seen devoted towards ontology development for their domains with the intention of creating, disseminating and managing resource descriptions of their domain knowledge into machine understandable and processable manner. Ontology construction is a difficult group activity that involves many people with the different expertise. Generally, domain experts are not familiar with the ontology implementation environments and implementation experts do not have all the domain knowledge. We have designed Collaborative Business Intelligence Ontology (CBIOnt) for BI4People project. In this paper, we present CBIOnt that is OWL 2 DL ontology for the description of collaborative session between different collaborators working together on the business intelligent platform. As the collaborative session between various collaborators belongs to some collaborative form, phase and research aspect, therefore CBIOnt captures this knowledge along with the collaborative session content (comments, questions, answers, etc.) so that one can inference various types of information stored on ontologies when required. In addition, it stores the location and temporal-spatial information about the collaboration held between collaborators. We believe CBIOnt serves as a formal framework for dealing with the collaborative session taken place among collaborators on the semantic Web.

## 1 Introduction

The terms artificial intelligence (AI) are used to illustrate a diversity of technologies referring to the creation of intelligent software or hardware able to learn and solve problems. According to Thormundsson (2022) from Statista Research Department, the global AI software market is predictable to develop approximately 54 percent year-on-year in 2020, reaching a forecast size of 22.6 billion U.S. dollars. These technologies include machine learning, computer vision, and natural language processing (NLP), among others. Nowadays ontology is regarded as a foundation stone in AI software. Guarino (2000) defines: "ontology is generally regarded as a designed artifact consisting of a specific shared vocabulary used to describe entities in some domain of interest, as well as a set of assumptions about the intended meaning of the terms in the vocabulary".

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