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## Thème

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AI techniques for Electronic Health Records

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# Abstract

Deep learning is a type of machine learning that imitates some of the human brain functionalities, it is capable of generating high-quality models for numerous fields. However, huge amounts of data are needed to create such models, and transferring this data to a central server to perform training is communications-intensive and can lead to data privacy leakage, especially if that data holds private information (like *Electronic health records* of patients). Two new emerging technologies can help eliminate these issues: Blockchain and federated learning: a machine learning paradigm that trains models locally without the need to upload data. In our thesis, we will be reviewing different works that combined blockchain to train deep learning models, either by using traditional deep learning or federated learning.

**Keywords:** Blockchain, Deep Learning, Federated Learning