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Building Explainable Machine Learning Lifecycle: Model Training, selection, and deployment with Explainability

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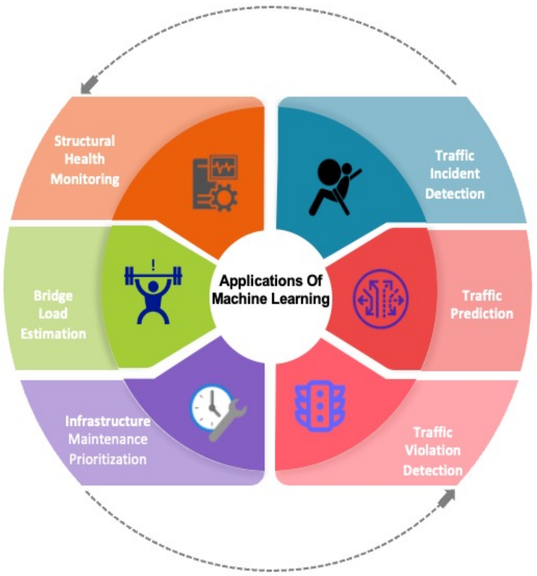
Machine Learning

Machine learning has rapidly gained popularity in recent years and has become an essential component of numerous domains, including critical domains such as infrastructure maintenance and monitoring. In order to build effective machine learning models, it is essential to have a deep understanding of the end-to-end pipeline and the tools and platforms available for building it.



machine learning in different domains

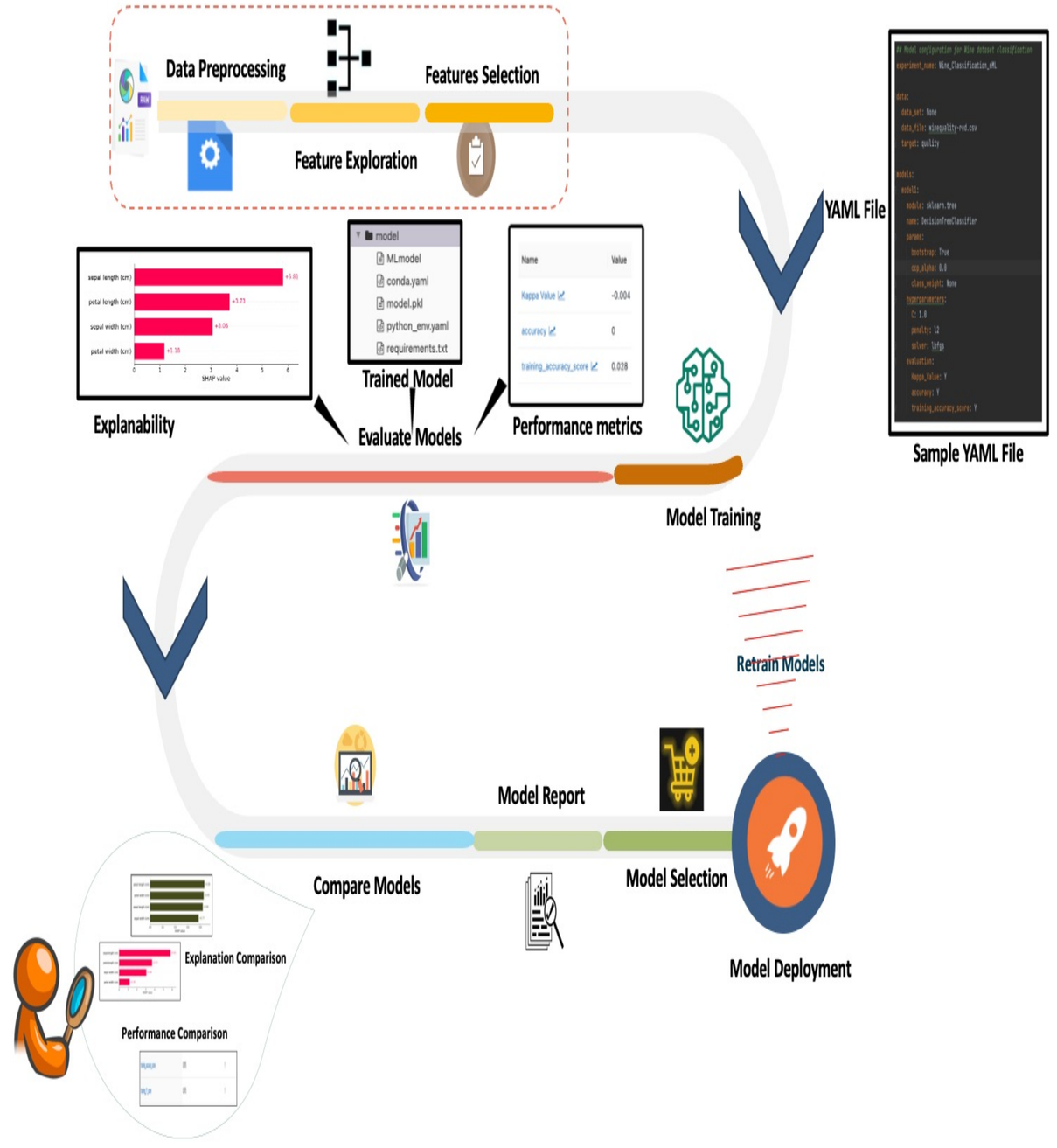
State-of-the-art open-source MLOps platforms

mlflow
Apache Airflow
Kubeflow
Pachyderm
DVC

Machine Learning Lifecycle

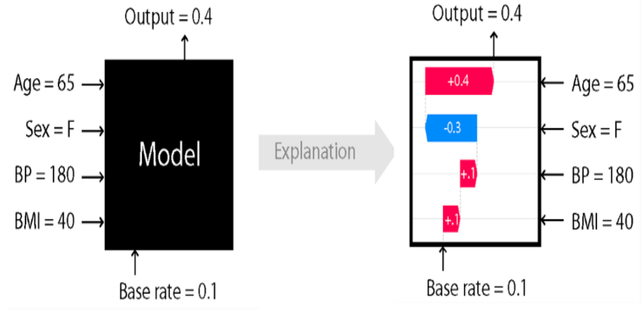
A set of interrelated stages for training and deploying machine learning models. It is divided into phases, each with its own set of activities and needs. It needs an important component – Explainability.

Building Explainable Machine Learning lifecycle with MLflow



Why add Explainability in ML Engineering

Explainable models help build trust in machine learning systems, as users and stakeholders can better understand the rationale behind the model's predictions or decisions. This transparency is particularly important in sensitive domains like healthcare, finance, infrastructure, and traffic, where the consequences of model decisions can be significant .



Model explanations [3]

Acknowledgements

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