5-26-2023

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

Vidit Singh  
*University of Nebraska at Omaha*, viditsingh@unomaha.edu

Yonas Kassa  
*University of Nebraska at Omaha*, ykassa@unomaha.edu

Brian Ricks  
*University of Nebraska at Omaha*, bricks@unomaha.edu

Robin Gandhi  
*University of Nebraska at Omaha*, rgandhi@unomaha.edu

Follow this and additional works at: [https://digitalcommons.unomaha.edu/isqafacproc](https://digitalcommons.unomaha.edu/isqafacproc)

Part of the Databases and Information Systems Commons

Please take our feedback survey at: [https://unomaha.az1.qualtrics.com/jfe/form/SV_8cchtFmpDyGfBLE](https://unomaha.az1.qualtrics.com/jfe/form/SV_8cchtFmpDyGfBLE)

**Recommended Citation**

[https://digitalcommons.unomaha.edu/isqafacproc/66](https://digitalcommons.unomaha.edu/isqafacproc/66)

This Poster is brought to you for free and open access by the Department of Information Systems and Quantitative Analysis at DigitalCommons@UNO. It has been accepted for inclusion in Information Systems and Quantitative Analysis Faculty Proceedings & Presentations by an authorized administrator of DigitalCommons@UNO. For more information, please contact unodigitalcommons@unomaha.edu.
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.

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

Building Explainable 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.

Acknowledgements

This work is partially supported by contracts W912HZ21C0006 and W912HZ23C0005, US Army Engineering Research and Development Center (ERDC), and Award Number 1762034 from the National Science Foundation.

References

