Interpreting Machine Learning Models (Decoding the Black Box)

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Abstract

Interpreting Machine Learning models is no longer a luxury but a necessity. In this session, we will explore practical techniques to interpret ML models using real time datasets across domains. Explainable AI is a developing field and many of the ideas presented here are pretty new.

Below are the broad topics to be covered :

•Feature Importances

•Partial Dependence Plots

•ICE Plots

•Model Prediction Explanations with LIME

•Building Interpretable Models with Surrogate Tree- based Models

•Model Prediction Explanation with SHAP values

Biography:

Sayan is a Data Science and Analytics Professional with around a decade's worth of rich experience across the analytics technology stack. He has worked across a multitude of roles spanning corporate trainer, individual contributor, developer, consultant, project manager, scrum master and client engagement manager. His USP is having a unique blend of extensive production experience on cutting edge AI problems and excellent training experience through his association with several of the world's top training vendors both in the online and offline formats. He has successfully trained tens of thousands of IT professionals spanning 10000+ hours across experience levels ranging from 0 to 30+ years including directors and founders. He is a regular visiting faculty for some of the best institutes like Great Lakes and IIIT Bangalore

catering to the AI/ML technology stack to name a few. He is extremely passionate in this domain and besides consulting with organisations like Walmart, he is also actively working with a few startups on high end projects in Computer Vision and Natural Language Processing.

Speaker Publications:

1. "Crack Detection in Concrete Surfaces using Image Processing, Fuzzy Logic, and Neural Networks"
2. "Assessing the effect of different bathymetric models on hydraulic simulation of rivers in data sparse regions"
3. "Statistical Modelling of Vertical Soil Moisture Profile: Coupling of Memory and Forcing"
4. Alternative Approach for Estimation of Precipitation Using Doppler Weather Radar Data"
5. "A Computationally Efficient and Physically Based Approach for Urban Flood Modeling Using a Flexible Spatiotemporal Structure"

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