**Masahiro Ryo et. al [1]** suggests Explainable AI (xAI) techniques that can help ecologists to interpret complex machine learning models used in SDMs, also discuss the importance of interpretability in species distribution models (SDMs), which are used to predict the distribution of species in different environments. **Existing techniques** improved the accuracy of SDMs, but the complex nature of these models makes it difficult for ecologists to interpret them. **The problem addressed** in the study is the challenge of interpretability in species distribution models (SDMs) that are used to predict the distribution of species in different environments. In this study, **authors proposed method** [1]is to use Explainable AI (xAI) techniques, such as the local interpretable model-agnostic explanation (LIME) tool, to decrypt the complex models at different scales and provide more accurate SDM predictions, which can ultimately lead to better insights into the relationships between environmental variables and species occurrence data. As an example, a reproducible SDM analysis in R on the African elephant is performed [1]. The benefits and limitations of these techniques are discussed Overall, while machine learning algorithms have improved the accuracy of SDMs, explainable AI can help overcome the challenge of interpretability in these models and allow for better insights into the relationships between environmental variables and species occurrence data. The technique of using Explainable AI methods, such as LIME, proves that this model is a more accurate and interpretable solution in comparison to other existing methods for species distribution modeling [1].

References

[1]. M. Ryo, B. Angelov, S. Mammola, J. M. Kass, B. M. Benito and F. Hartig, "Explainable artificial intelligence enhances the ecological interpretability of black-box species distribution models," Ecography, vol. 44, no. 2, pp. 199-205, Feb. 2021.