

Preface

This master's thesis represents a significant milestone in my academic journey, as I delve into the realm of species distribution modelling for the Indian Gaur (*Bos gaurus*). It is with great enthusiasm and dedication that I present this research, which explores the habitat suitability and distribution patterns of this magnificent species.

First and foremost, I would like to express my heartfelt gratitude to my thesis advisor, Sahil Shah. His expertise in the field of Deep Learning, guidance, and unwavering support have been instrumental in shaping the direction of this study and refining my research skills. His valuable insights and constructive feedback has significantly contributed to the quality and rigor of this thesis.

I am also indebted to the works of scholars such as Menon, Choudhury, and Sankar et al., whose extensive research and publications have laid the foundation for understanding the ecological significance and habitat preferences of the Indian Gaur. Their contributions have been invaluable in providing a comprehensive overview of the species and its conservation challenges.

I am deeply grateful to my family and friends for their unwavering support, encouragement, and belief in my abilities throughout this academic endeavour. Their constant motivation and understanding have been a source of strength during challenging times, and I am privileged to have their love and support.

Furthermore, would like to acknowledge Symbiosis Institute of Geoinformatics, SIU for providing the necessary resources, facilities, and conducive academic environment that have nurtured my intellectual growth and allowed me to pursue this research. The access to Geographic Information Systems (GIS) tools and the availability of relevant data have been crucial in conducting my analysis and modelling experiments.

Lastly, I extend my sincere appreciation to all the researchers, conservationists, and computer scientists who have contributed to the collection and sharing of species occurrence data and environmental information and increased technological advances. Their collaborative efforts and commitment to biodiversity conservation have been instrumental in advancing our understanding of species distributions and guiding conservation strategies.

It is my hope that this thesis contributes to the existing knowledge of species distribution modelling and provides valuable insights into the habitat suitability and conservation needs of the Indian Gaur by utilising the technology available. I am grateful for the opportunity to contribute to this field and also for the intellectual growth and personal development this research has provided me.

Thank you.