Preface

Bioinformatics is the application of tools of computation and analysis for capturing and interpreting biological data. Machine learning is a branch of artificial intelligence and computer science that has applications in multiple fields. Machine learning in bioinformatics involves the application of machine learning algorithms to bioinformatics such as proteomics, genomics, microarrays, evolution, text mining and systems biology. Genomics is a prominent area of bioinformatics involved in the study of genome mapping, genomic expression regulation, and genome evolution and editing. In medical diagnostics, some of the major applications of machine learning in genomics are genome sequencing, gene editing, and improving clinical workflow. This book outlines a machine learning approach towards bioinformatics. A number of latest researches have been included to keep the readers updated with the global concepts in this area of study. It aims to serve as a resource guide for students and experts alike and contribute to the growth of the discipline.

This book is a result of research of several months to collate the most relevant data in the field.

When I was approached with the idea of this book and the proposal to edit it, I was overwhelmed. It gave me an opportunity to reach out to all those who share a common interest with me in this field. I had 3 main parameters for editing this text:

1. Accuracy – The data and information provided in this book should be up-to-date and valuable to the readers.

2. Structure – The data must be presented in a structured format for easy understanding and better grasping of the readers.

3. Universal Approach – This book not only targets students but also experts and innovators in the field, thus my aim was to present topics which are of use to all.

Thus, it took me a couple of months to finish the editing of this book.

I would like to make a special mention of my publisher who considered me worthy of this opportunity and also supported me throughout the editing process. I would also like to thank the editing team at the back-end who extended their help whenever required.

Editor