



Practical Applications of Computational Biology and Bioinformatics, 17th International Conference (PACBB 2023) [

Rocha, Miguel

Monografía

This book aims to promote the interaction among the scientific community to discuss applications of CS/AI with an interdisciplinary character, exploring the interactions between sub-areas of CS/AI, bioinformatics, chemoinformatics, and systems biology. The success of bioinformatics in recent years has been prompted by research in molecular biology and molecular medicine in several initiatives. This year's technical program presents both high quality and diversity, with contributions in well-established and evolving areas of research. The PACBB'23 technical program has selected 9 full papers in the main track and, as in past editions, it will be special issues in ranked journals. This symposium is organized by the LASI and Centro Algoritmi of the University of Minho (Portugal). The authors would like to thank all the contributing authors, the members of the program committee, national associations (AEPIA, APPIA), and the sponsors (AIR Institute)

<https://rebiunoda.pro.baratznet.cloud:28443/OpacDiscovery/public/catalog/detail/b2FpOmNlbGVicmF0aW9uOmVzLmJhcmF0ei5yZW4vMzQyMzUzNTM>

Título: Practical Applications of Computational Biology and Bioinformatics, 17th International Conference (PACBB 2023) electronic resource] edited by Miguel Rocha, Florentino Fdez-Riverola, Mohd Saberi Mohamad, Ana Belén Gil-González

Edición: 1st ed. 2023

Editorial: Cham Springer Nature Switzerland Imprint: Springer 2023

Descripción física: 1 online resource (113 pages)

Mención de serie: Lecture Notes in Networks and Systems 2367-3389 743

Contenido: Intro -- Preface -- Organization -- Contents -- Main Track -- The Impact of Schizophrenia Misdiagnosis Rates on Machine Learning Models Performance -- 1 Introduction -- 2 Methods -- 2.1 Data Description and Quality Control -- 2.2 Genotype-Phenotype Association -- 2.3 Machine Learning Models -- 2.4 Over-Representation Analysis -- 3 Results -- 3.1 Association Test -- 3.2 Test on Train Data -- 3.3 Filtering of Discordant Samples -- 3.4 Classification Model -- 4 Discussion -- 5 Conclusion -- References -- Deep Learning and Transformers in MHC-Peptide Binding and Presentation Towards Personalized Vaccines in Cancer Immunology: A Brief Review -- 1 Introduction -- 2 Methodology -- 3 Input Encoding -- 4 Deep Learning and Transformers

Methods -- 4.1 Deep Learning -- 4.2 Transformers -- 5 Discussion -- References -- Auto-phylo: APipeline Maker forPhylogenetic Studies -- 1 Introduction -- 2 Material andMethods -- 3 Results -- 3.1 Auto-phylo Modules -- 3.2 Setting upanAuto-phylo Pipeline -- 3.3 Bacterial AOs May Have aFunction Similar toAnimal GULO -- 3.4 Identification ofBacterial Species Groups thatHave AOs Closely Related toAnimal GULO -- 4 Conclusion -- References -- Feature Selection Methods Comparison: Logistic Regression-Based Algorithm andNeural Network Tools -- 1 Introduction -- 1.1 Classification Problem -- 1.2 Feature Selection Methods -- 2 Methods andMaterials -- 2.1 Logistic Regression-Based Algorithm -- 2.2 Neural Networks Approach -- 2.3 Materials -- 3 Results -- 3.1 Logistic Regression-Based Algorithm -- 3.2 Neural Networks Approach -- 3.3 Results Comparison -- 4 Conclusions -- References -- A New GIMME-Based Heuristic for Compartmentalised Transcriptomics Data Integration -- 1 Introduction -- 2 Methods -- 2.1 Flux Balance Analysis -- 2.2 Gene Inactivity Moderated by Metabolism and Expression 2.3 Implementation of the Proposed Method -- 2.4 The Model -- 2.5 The Dataset -- 3 Results -- 3.1 Case Studies -- 4 Discussion and Conclusions -- References -- Identifying Heat-Resilient Corals Using Machine Learning and Microbiome -- 1 Introduction -- 2 Related Work -- 3 Methods -- 3.1 Pipeline -- 3.2 Experimental Setup -- 4 Results -- 5 Analysis and Discussion -- 6 Conclusion -- References -- Machine Learning Based Screening Tool for Alzheimer's Disease via Gut Microbiome -- 1 Introduction -- 2 Related Work -- 3 Methodology -- 4 Experimental Analysis -- 4.1 Experimental Settings -- 4.2 Experimental Results -- 4.3 Discussion -- 5 Conclusion and Future Work -- References -- Progressive Multiple Sequence Alignment for COVID-19 Mutation Identification via Deep Reinforcement Learning -- 1 Introduction -- 2 Methodology -- 2.1 Progressive Deep Reinforcement Learning -- 2.2 Sequence Alignment -- 3 Result and Discussion -- 3.1 Analysis of Alignment Results -- 4 Conclusion -- References -- Analysis oftheConfidence inthePrediction oftheProtein Folding byArtificial Intelligence -- 1 Introduction -- 2 Metrics andScores -- 3 Material andMethods -- 4 Results -- 5 Discussion -- 6 Conclusions andFuture Work -- References -- Doctoral Consortium -- Neoantigen Detection Using Transformers and Transfer Learning in the Cancer Immunology Context -- 1 Introduction -- 2 Problem Statement -- 3 Related Work -- 4 Hypothesis -- 5 Proposal -- 6 Preliminary Results -- 7 Reflections -- References -- Author Index

ISBN: 3-031-38079-7

Materia: Computational intelligence Artificial intelligence Bioinformatics Computational Intelligence Artificial Intelligence Bioinformatics

Autores: Fdez-Riverola, Florentino Mohamad, Mohd Saberi Gil González, Ana Belén

Enlace a formato físico adicional: Print version Rocha, Miguel. Practical Applications of Computational Biology and Bioinformatics, 17th International Conference (PACBB 2023) Cham : Springer,c2023 9783031380785

Punto acceso adicional serie-Título: Lecture Notes in Networks and Systems 2367-3389 743

Baratz Innovación Documental

- Gran Vía, 59 28013 Madrid
- (+34) 91 456 03 60
- informa@baratz.es