Alma Mater Studiorum · Università di Bologna

Physics and Astronomy Department
PhD Thesis in Applied Physics

Implementation and optimization of algorithms in Biological Big Data Analytics

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Chapter 1

Biological Big Data - CHIMeRA project

Every day a large quantity of data are produced and shared along the Internet and Web-pages. We can find a vast amount of data into the social networks pages, ...

In this vast amount of data only a small part of it can be considered as informative and it is always harder to extract this core of informations from them. Moreover, we have to take into account that all these kind of informations are not ...

The increasing availability of large-scale biomedical literature under the form of public on-line databases, has opened the door to a whole new understanding of multi-level associations between genomics, protein interactions and metabolic pathways for human diseases via network approaches. Many structures and resources aiming at such type of analyses have been built, with the purpose of disentangling the complex relationships between various aspects of the human system relating to diseases [2, 1].

1.1 The CHIMeRA project

1.2 CHIMeRA query

1.3 Data extraction - Web scraping

Bibliography

[1] C. A. e. a. Hidalgo. A dynamic network approach for the study of human phenotypes. *PLOS Computational Biology*, 5(4):1–11, 04 2009.

[2] X. Zhou and et al. Human symptoms–disease network. *Nature Communications*, 5.