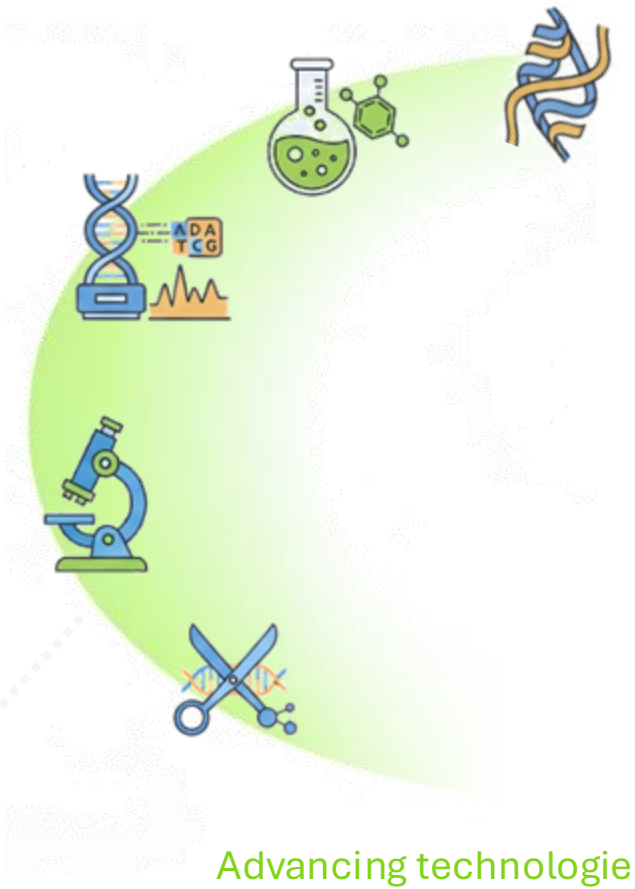
Percorso «Tecnologie Bioinformatiche e Sistemiche»

UNIVERSITÀ DEGLI STUDI DI MILANO BICOCCA

BtBs Dip. di Biotecnologie e Bioscienze

Percorso Tecnologie Bioinformatiche e Sistemiche

What's the logic?



Advancing technologies

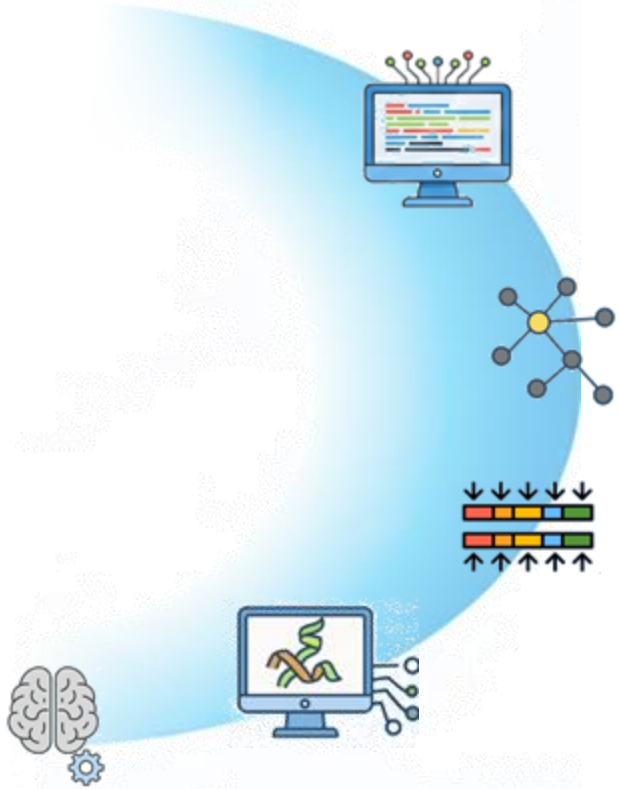
☑ increasingly **detailed** experimental insight into biological and chemical systems

☑ generation of ever-growing biological **data** sets

Advancing computational power and algorithms

☑ accurate **modeling** of biological processes/systems

☑ powerful **data analysis**



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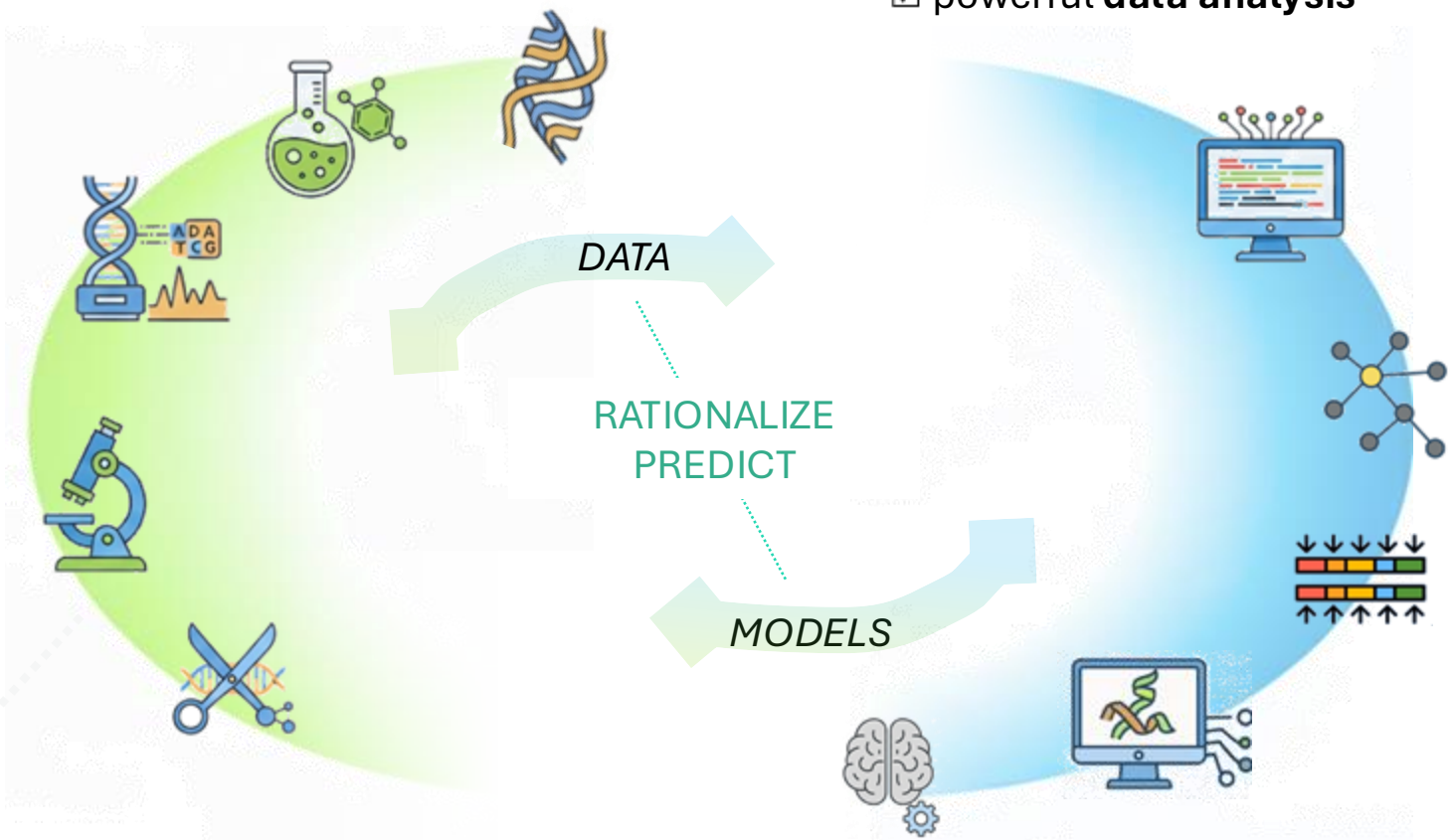

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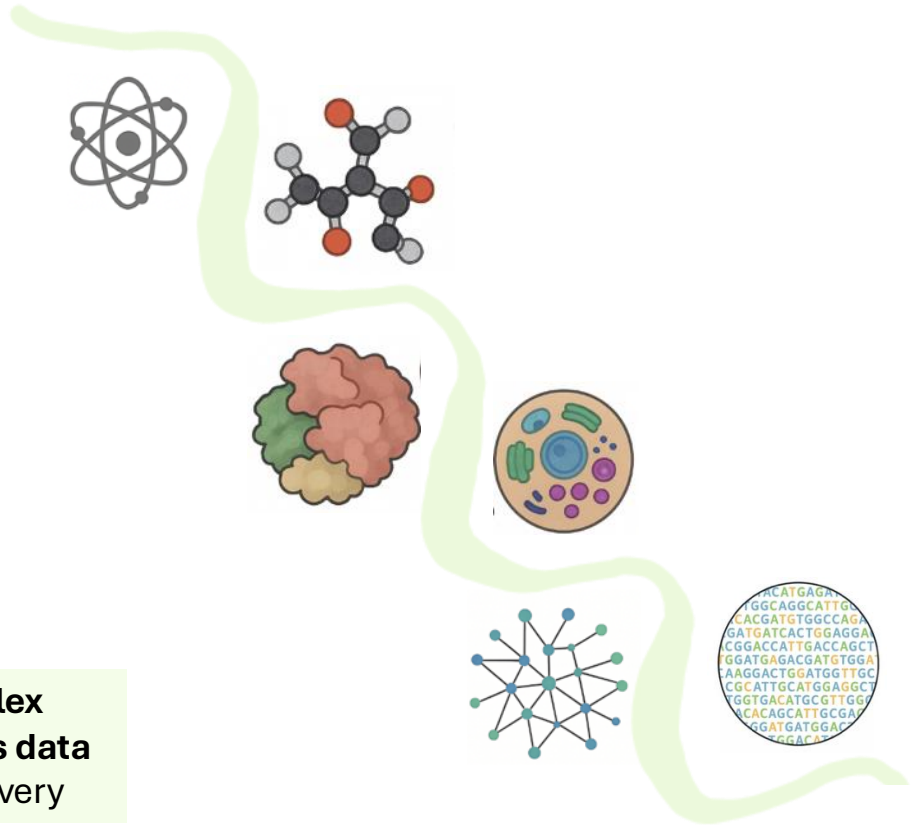
Objectives

The program provides the foundations to navigate **advanced computational approaches** for the extraction of information from complex **biological data** and for the **simulation** of biological and biomolecular systems, promoting an **integrated, multi-scale** view of biological processes relevant to industrial biotechnology.



Some key skills

Analysis of complex biological and omics data for biomarker discovery

Multi-scale modeling and simulation of biological systems and processes, from biomolecular to cellular and network levels

Modeling of metabolic, genetic and regulatory networks to support the design and optimization of industrial bioprocesses and cell factories

Computational enzyme optimization and drug design for the development of protein variants and novel bioactive compounds.

Structural biology and molecular modeling including protein structure prediction and structure–function relationships.

Application of artificial intelligence and machine learning in computational biotechnology

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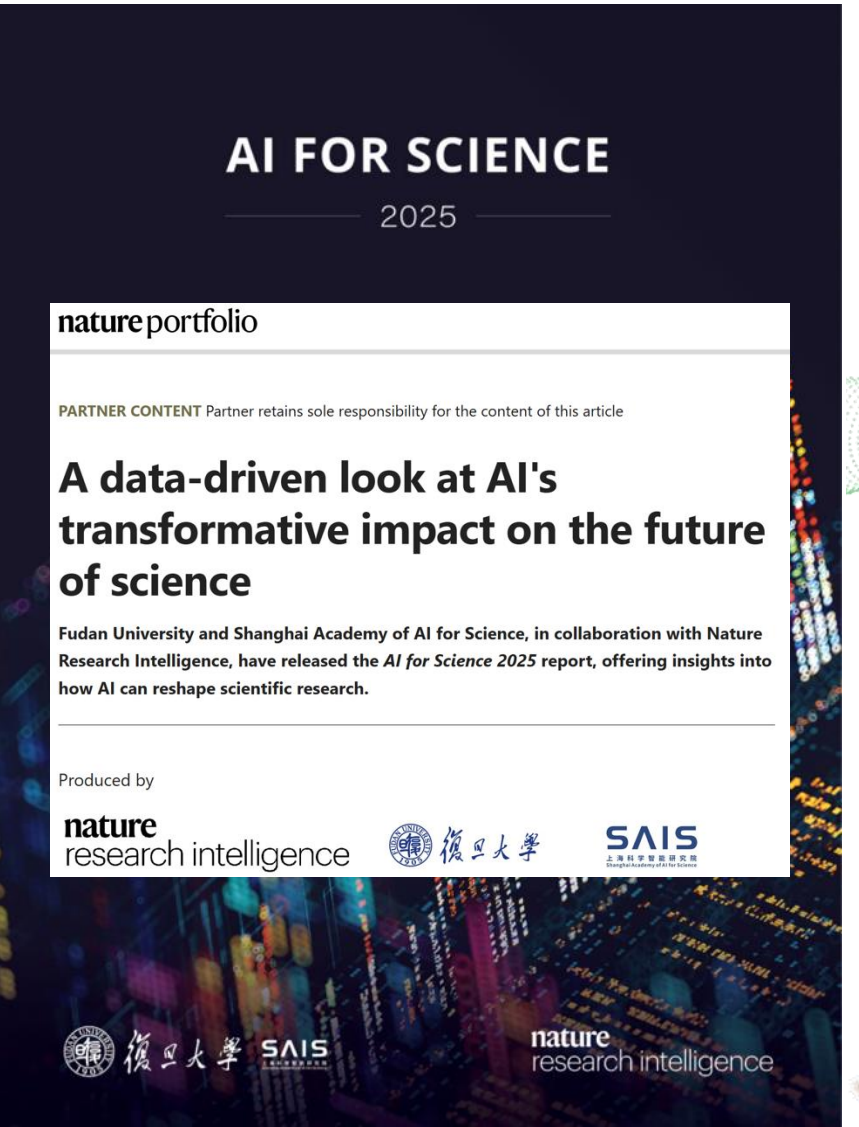
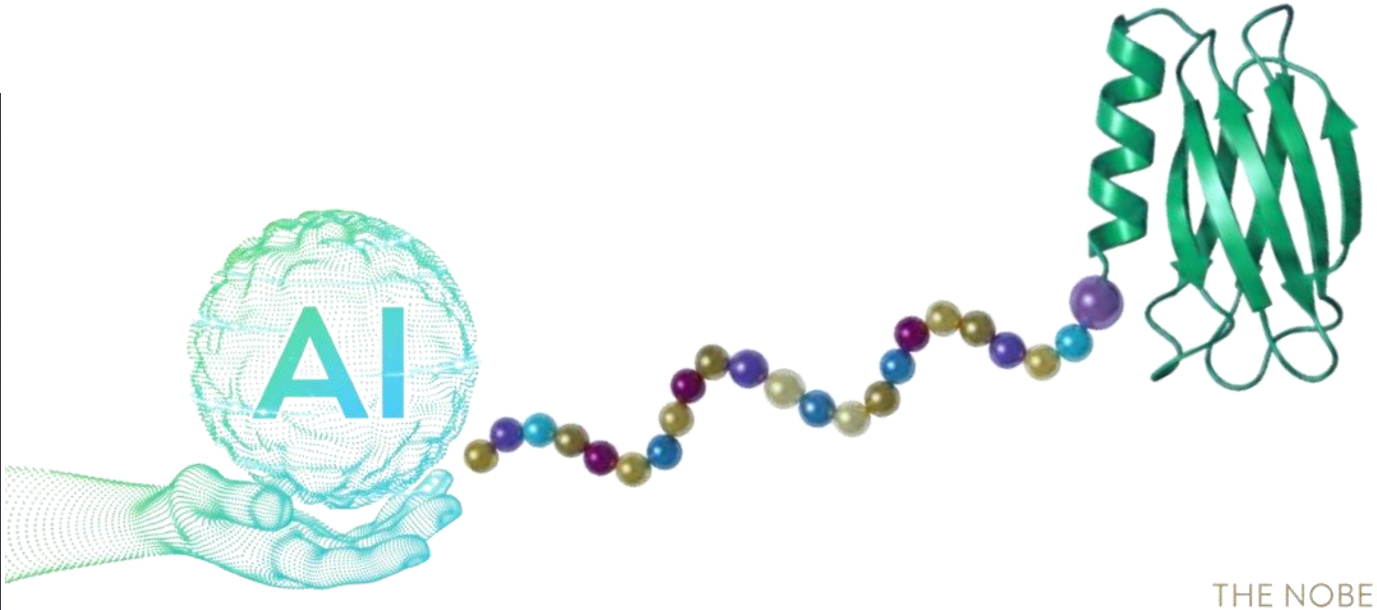
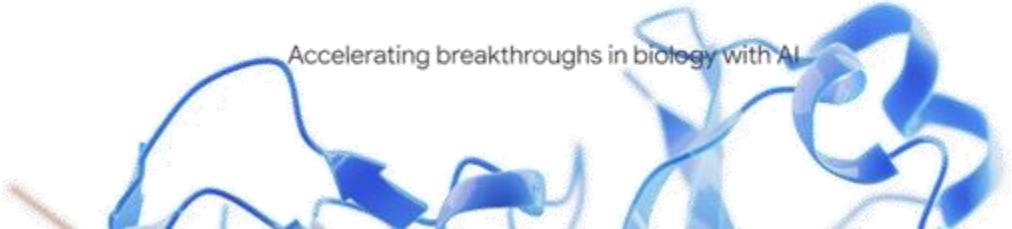
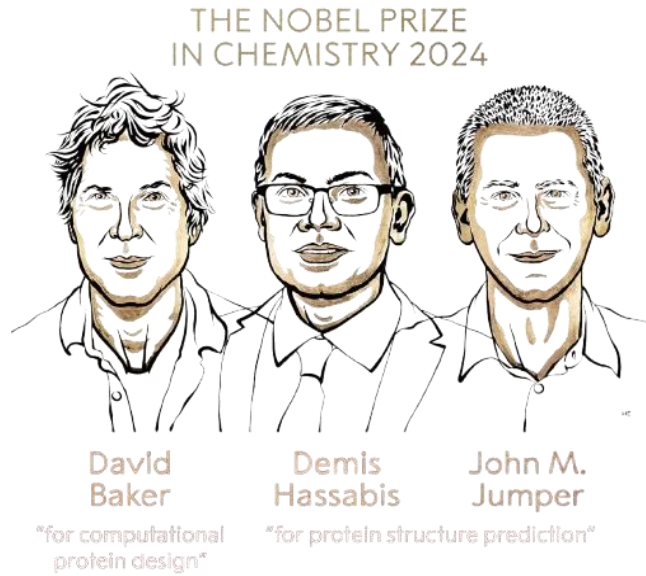
Biotechnology and AI









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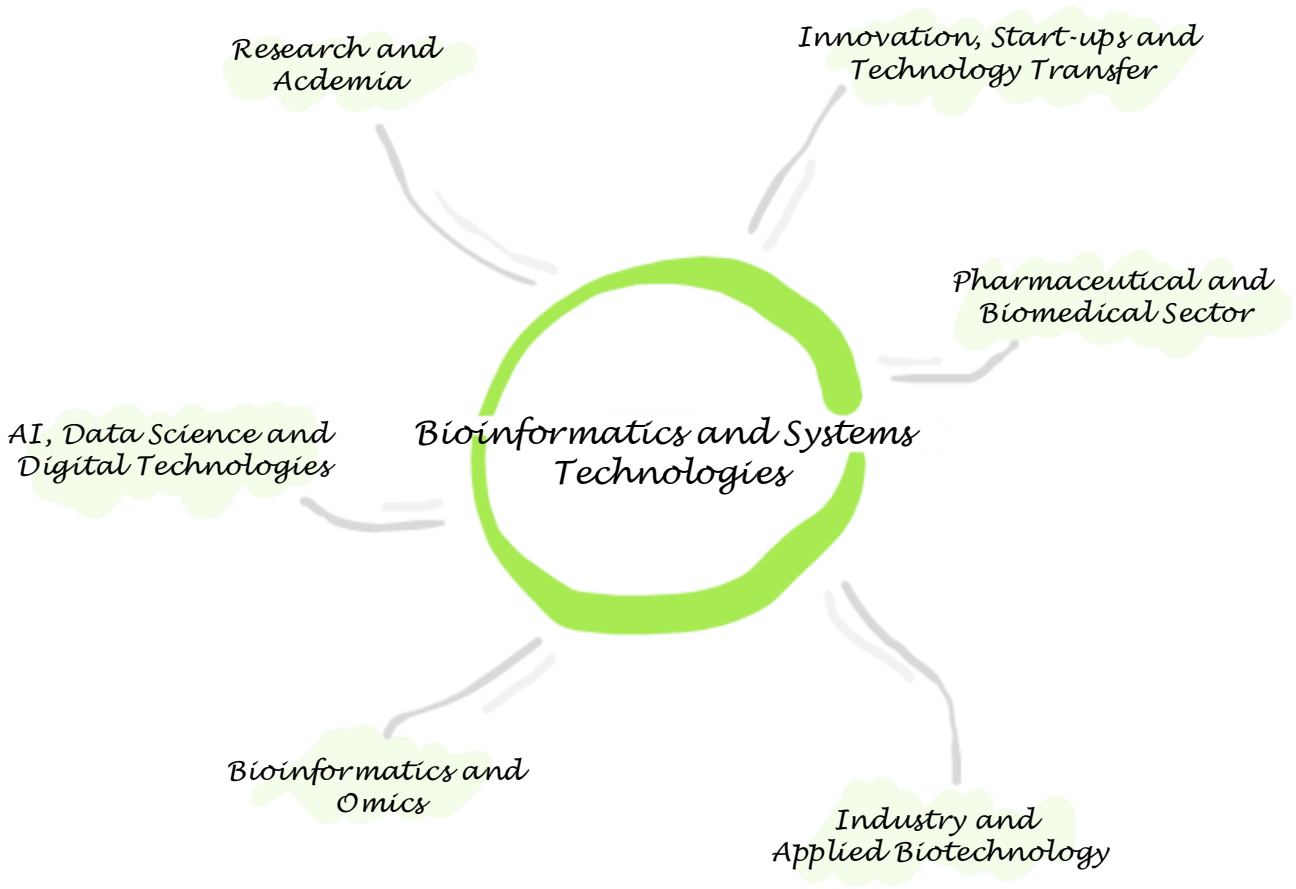
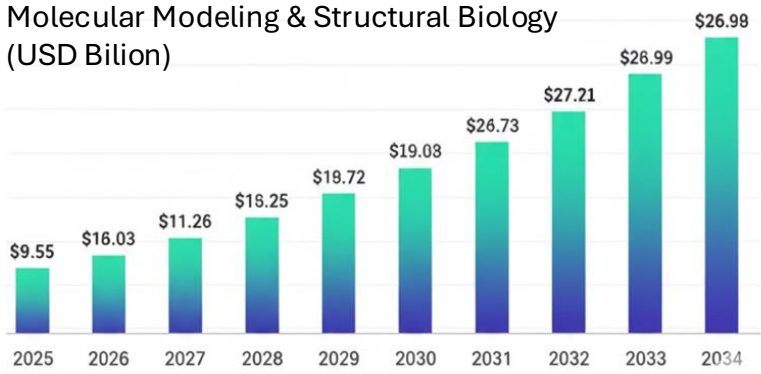
Career opportunities





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Towards Healthcare

Percorso Tecnologie Bioinformatiche e Sistemiche

Structure and contents

Un insegnamento a scelta:	Tecnologie Bioinformatiche e sistemiche
Discipline Chimiche 6 CFU	• Strumenti computazionali per la bioinformatica (CHIM/03)
Discipline Biologiche 6 CFU	• Systems biochemistry (BIO/10)
Discipline Per Le Competenze Professionali - Gruppo A 6 CFU	• Proprietà intellettuale (IUS/04) • Sociologia e comunicazione della scienza (SPS/07)
Discipline Per Le Competenze Professionali - Gruppo B 6 CFU	• Metodologie bioinformatiche (INF/01) • Computational systems biology (INF/01)
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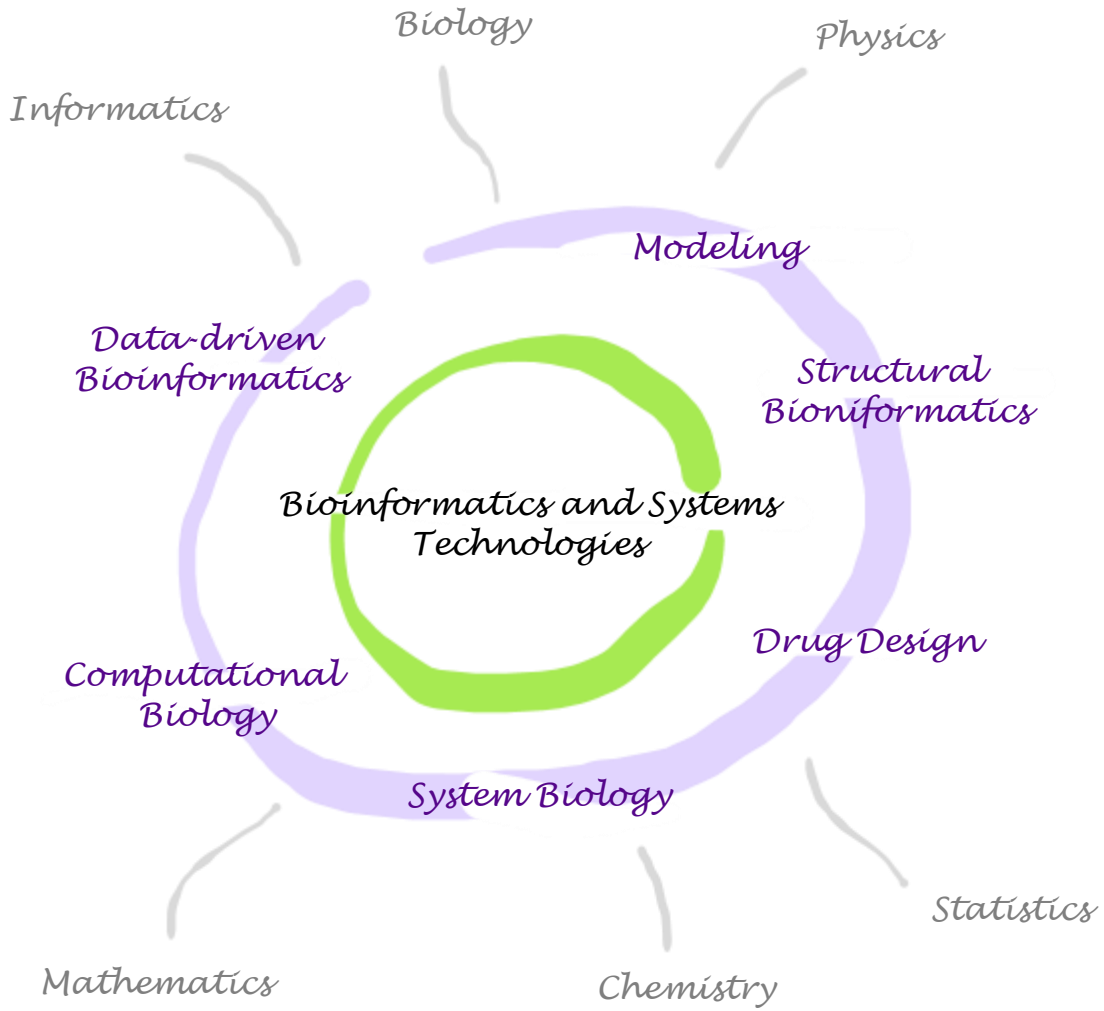

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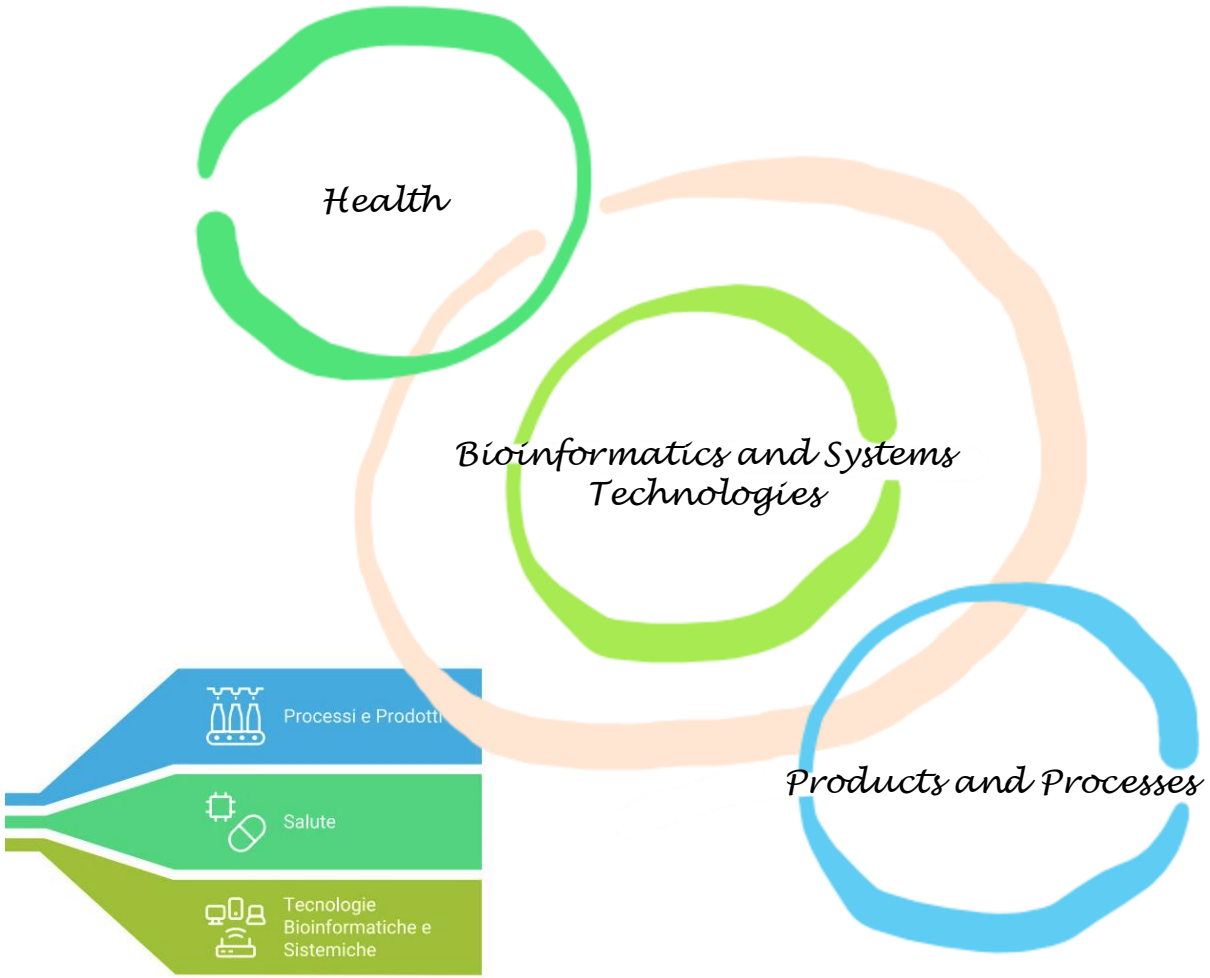

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QUESTIONS

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