

Módulo_I Excel

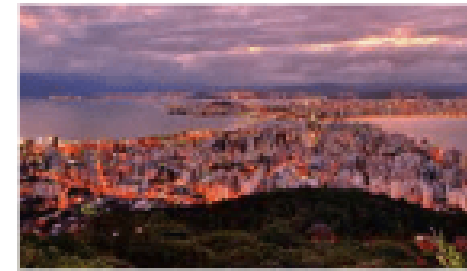


QUEM SOU EU?

33 ANOS



FLORIANÓPOLIS/SC



FARROUPILHA/RS



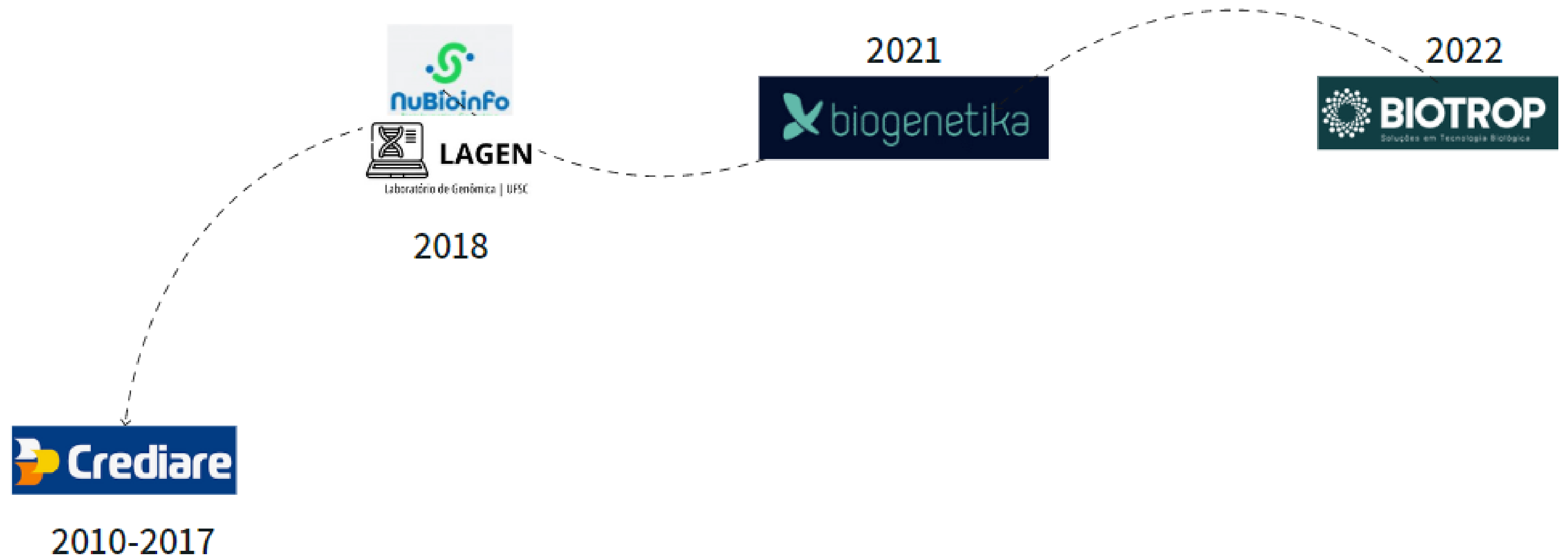
GESTÃO FINANCEIRA

CIÊNCIAS BIOLÓGICAS



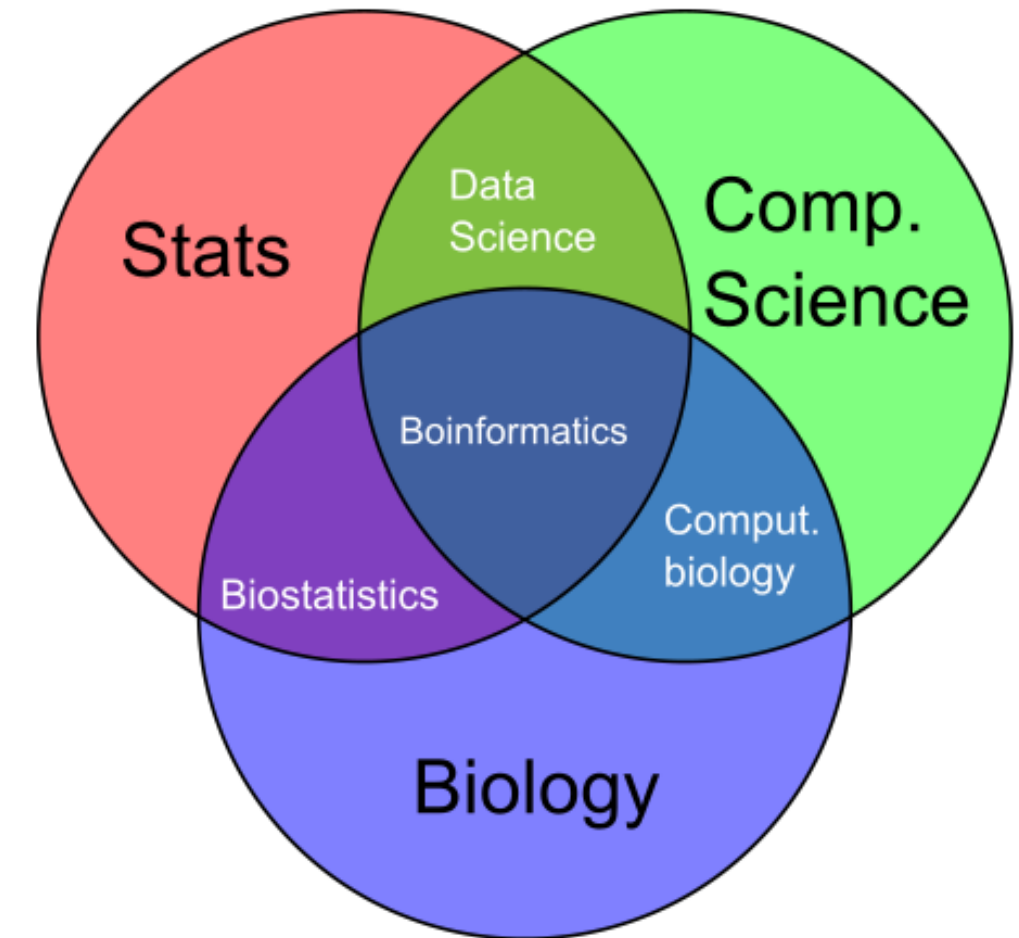
PÓS ANÁLISE DE DADOS

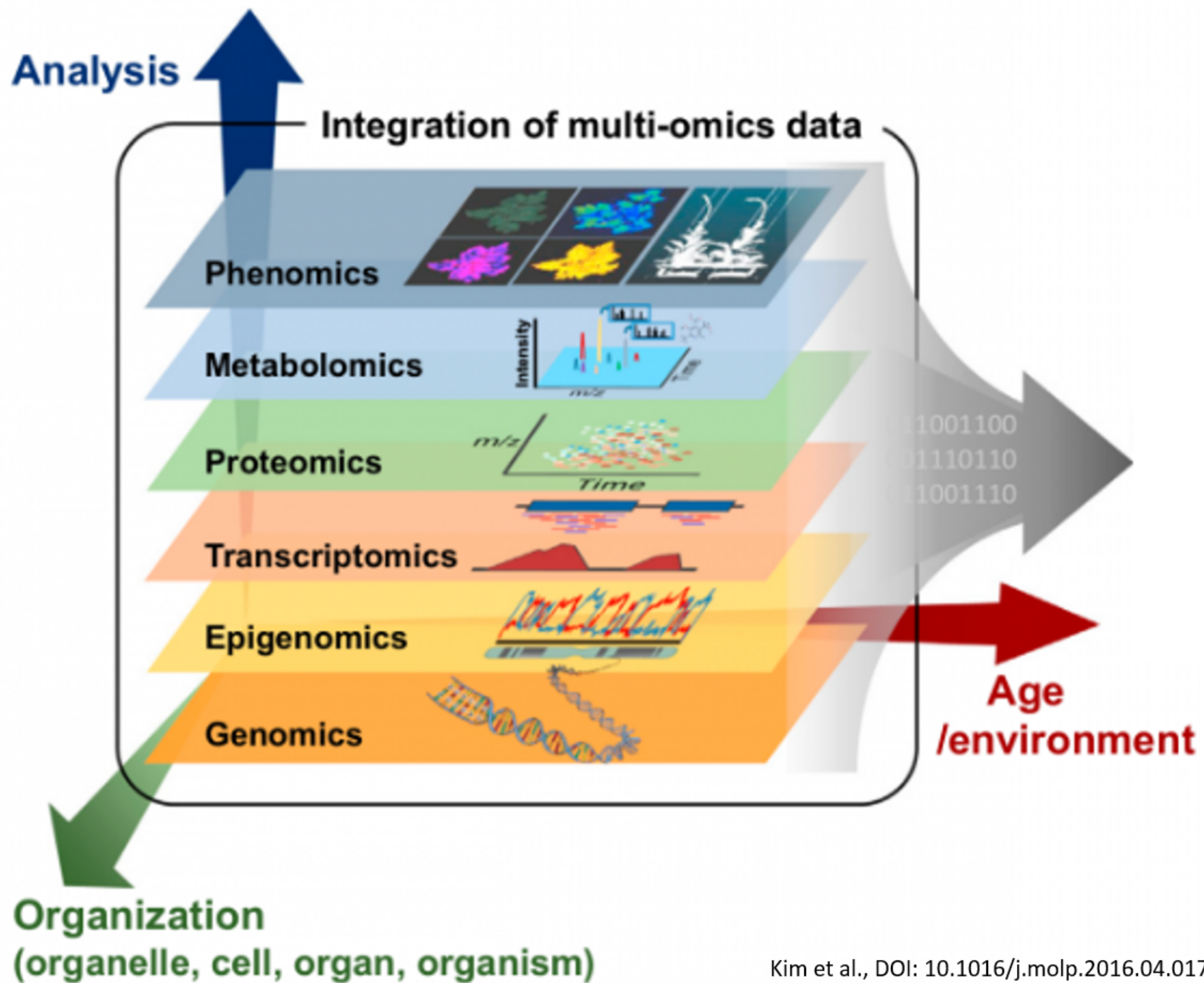
TRAJETÓRIA



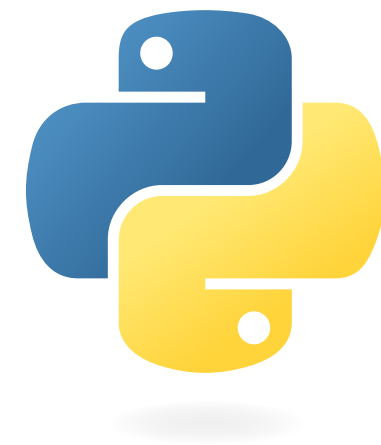
Bionformática

- A Bioinformática é um campo interdisciplinar;
- Atua em parceria com a **ciência da computação, estatística, matemática** para analisar, interpretar e processar dados biológicos.
- Desenvolvimento de novos algoritmos;
- Análise e interpretação de vários tipos de dados biológicos;
- Gerenciamento eficientes de diferentes tipos de informações biológicas;
- Análise de sequências;
- Análises estruturais;
- Análise funcional que inclui perfil de expressão gênica, previsão de interação proteína-proteína, previsão de localização subcelular, reconstrução e simulação de vias metabólicas.

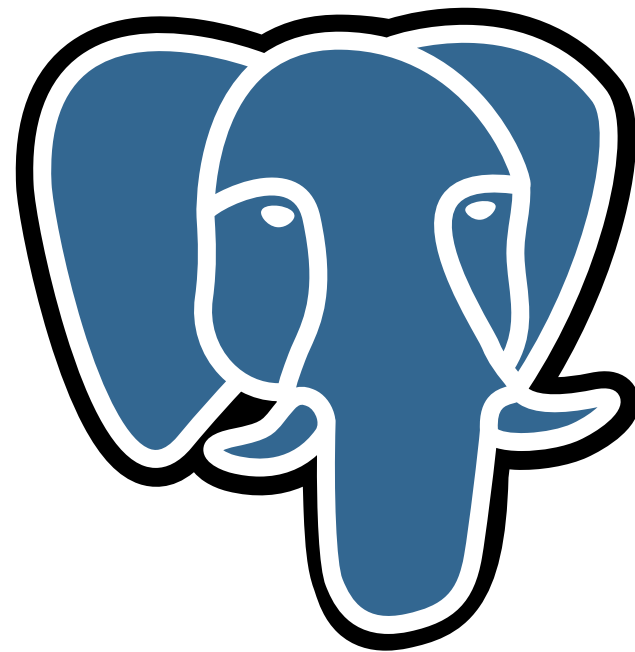




Ferramentas



pythonTM



E o Excel?






Limitações

- Processamento lento (com muitos dados);
- Mais difícil de automatizar;
- Erros humanos e de software;

JOURNAL ARTICLE







Keemei: cloud-based validation of tabular bioinformatics file formats in Google Sheets

Jai Ram Rideout, John H Chase, Evan Bolyen, Gail Ackermann, Antonio González, Rob Knight, J Gregory Caporaso 

GigaScience, Volume 5, Issue 1, December 2016, s13742-016-0133-6,

<https://doi.org/10.1186/s13742-016-0133-6>

Published: 13 June 2016 **Article history** ▼

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Abstract

Background

Bioinformatics software often requires human-generated tabular text files as input and has specific requirements for how those data are formatted. Users frequently manage these data in spreadsheet programs, which is convenient for researchers who are compiling the requisite information because the spreadsheet programs can easily be used on different platforms including laptops and tablets, and because they provide a familiar interface. It is

Excel-Reverse-Complement

A simple add-in for Excel supplying functions to calculate the reverse, complement, and reverse-complement of a DNA or RNA sequence.

Installation

Refer to Excel documentation on how to install Excel Add-Ins. In Excel 2011 for Mac, the procedure is as follows:

- Select 'Tools->Add-Ins...' and click the 'Select' button
- Navigate to the .xlam file provided by this package and click 'Open'
- Ensure that the add-in has a check mark next to it and click 'OK'

Usage

revcom

This returns the reverse complement of a DNA or RNA sequence. It takes in a string and an optional second parameter specifying whether the string is RNA or DNA:

`=revcom("DNA/RNA SEQUENCE", isRNA)`

replacing "DNA/RNA_SEQUENCE" with the actual sequence or cell reference to be reverse-complemented and isRNA as a 1 if the input sequence is RNA.


Example:

`=revcom("ATATCGA")` will output "TCGATAT"

GenAlEx 6.51b2 – Population Genetic Analysis within Microsoft Excel

GenAlEx 6.51b2

:: DESCRIPTION

GenAlEx  (Genetic Analysis in Excel) is a user-friendly cross-platform package for population genetic analysis that runs within Microsoft

Autocorrect errors in Excel still creating genomics headache

Despite geneticists being warned about spreadsheet problems, 30% of published papers contain mangled gene names in supplementary data.


Erros

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Mistaken Identifiers: Gene name errors can be introduced inadvertently when using Excel in bioinformatics

[Barry R Zeeberg](#), [Joseph Riss](#), [David W Kane](#), [Kimberly J Bussey](#), [Edward Uchio](#), [W Marston Linehan](#), [J Carl Barrett](#) & [John N Weinstein](#) 

[BMC Bioinformatics](#) **5**, Article number: 80 (2004) | [Cite this article](#)

119k Accesses | **58** Citations | **625** Altmetric | [Metrics](#)

O que vamos aprender?

Introdução ao Excel
Função Texto para Colunas
Fórmulas matemáticas
Funções condicionais (SE, CONTSE, SOMASE)
Funções de busca (procv e proch)
Unindo funções
Fixação de referências em fórmulas
Função SEERRO
Formatação condicional
Gráficos no Excel
Tabelas dinâmicas
Filtros
Validação de dados

Vamos lá?