

polcuscó

bioinformatician && machine learning geek

contact



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+34 684 200 939

languages

catalan & spanish

english

portuguese

programming



R

Python

C & C#

HTML & CSS

Shell scripting

L^AT_EX

interests

genomics, machine learning, big data, data visualization

education

- | | | |
|------------|--|--------------------------|
| since 2013 | PhD in Biomedicine
<i>Machine learning approach to the study of chromatin</i>
Thesis. | Universitat Pompeu Fabra |
| 2010–2011 | MSc in Pharmaceutical Industry & Biotechnology | Universitat Pompeu Fabra |
| 2005–2010 | BSc in Biology
Specialization in Human Biology | Universitat Pompeu Fabra |

experience

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|-----------|--|---|
| 2019 | Gastrointestinal and Endocrine Tumor Group
<i>Bioinformatician</i>
I developed and maintained NGS analysis pipelines, working mostly with whole-exome sequencing data from both tumors and cfDNA. I also wrote scripts for custom analyses and performed data visualization tasks. | Vall d'Hebron Institute of Oncology |
| 2017–2019 | Bioinformatics Unit
<i>Bioinformatician</i>
I also worked with different research groups in the institute and gave them bioinformatics support. I helped them decide which data analyses they needed in their projects and then I conducted them. It was also my responsibility to communicate the results of such analyses to help guide their research. | Vall d'Hebron Institute of Oncology |
| 2013–2017 | Genome Architecture Lab
<i>PhD student</i>
I worked from raw genomics data, especially ChIP-seq. I used both supervised and unsupervised machine learning methods and developed of our own (see publications). I have a solid grasp of best practices in machine learning and how to avoid common pitfalls (see publications).
Lab website. | Centre for Genomic Regulation |
| 2011–2012 | Neuropharmacology Lab
Technician | Department of Experimental and Health Sciences, UPF |
| 2011 | Central Nervous System Unit
Researcher during my MSc internship | Pharmaceutical R&D Centre, Ferrer Internacional |
| 2010 | Keypoint CRO
Clinical Research Associate during my BSc internship | Grupo Keypoint |
| 2008 | Neuropharmacology Lab
Student during summer internship | Department of Experimental and Health Sciences, UPF |

publications

- Cuscó P, Filion GJ. Zerone: a ChIP-seq discretizer for multiple replicates with built-in quality control. *Bioinformatics*. 2016;32(19):2896-902.
- Corrales M, Cuscó P, Usmanova DR, Chen HC, Bogatyreva NS, Filion GJ, Ivankov DN. Machine Learning: How Much Does It Tell about Protein Folding Rates? *PLoS One*. 2015;10(11):e0143166.
- Zorita E, Cuscó P, Filion GJ. Starcode: sequence clustering based on all-pairs search. *Bioinformatics*. 2015;31(12):1913-9.

courses

2017	From Science to Market Universitat de Barcelona / Universitat Politècnica de Catalunya A course on entrepreneurship focused on technology-based companies.
2014	Algorithms: Design and Analysis, Part 1 Stanford University An in-depth review of classical algorithms and data structures.
2013	Machine Learning Stanford University A reference on the fundamentals and good practices of machine learning.
2012	Web Fundamentals, JavaScript, jQuery, PHP, Python Codecademy Several courses on different programming languages.
2012	Introduction to Computing Principles Stanford University An introduction to the key ideas of computing.