Sergio Castillo Lara

Data Scientist

PERSONAL INFORMATION

Address	Barcelona, Spain	Email	s.cast.lara@gmail.com
Telephone	+34 657926201	LinkedIn	linkedin.com/sergiocastillolara
Date of birth	October 27th, 1992	Github	github.com/scastlara

EXPERIENCE

2017 - Present

Ph.D. Fellow

Computational Genomics Lab, University of Barcelona
Supervised by: Josep F. Abril (jabril@ub.edu)

– Trained and applied machine learning models to predict gene regulatory networks and protein-protein interactions.

– Developed Django and Flask web applications to integrate and visualize predictions and other heterogeneous biological data from multiple data sources.

– Set up and managed multiple databases using Neo4j and MySQL.

– Analyzed large sequence datasets using various pipelines involving different statistical approaches (descriptive statistics, clustering, visualization, statistical inference, and so on),

– Assistant teacher of the courses: “Introduction to Algorithmics”: Msc. Bioinformatics for Health Sciences at UPF; “Bioinformatics”: BSc. Biochemistry at UB; “Computational Genomics”: BSc. Bioinformatics at UPF/UPC/UB.

2014 – 2017

Research Intern

Computational Genomics Lab, University of Barcelona

– Prediction of an interactions network of planarian genes and proteins using sequence homology information and machine learning.

–Implementation of a pipeline to retrieve protein-protein interactions from scientific literature using natural language processing.

EDUCATION

2015 – 2017

M.Sc. Bioinformatics for health sciences
Universitat Pompeu Fabra, Barcelona, Spain

2010 - 2015

B.Sc. Biology
Universitat de Barcelona, Barcelona, Spain

PROFESSIONAL SKILLS

Programming	Python, Perl, R, JavaScript, Bash
Databases	Neo4j, Cypher Query Language, SQL
Data Science	Machine learning, ggplot2, scikit-learn, numpy, R caret
Web	HTML5, CSS, Django, Flask, jQuery, Bootstrap, Cytoscape.js, plotly.js
Other	Statistics, RNA-seq, Linux, git, LaTeX

LANGUAGES

English	Full professional proficiency
Spanish & Catalan	Native language

PUBLICATIONS

R. Arenas-Galnares†, **S. Castillo-Lara†**, V. Toulis, D. Boloc, R. Gonzàlez-Duarte, G. Marfany, J.F. Abril (2019) † *Contributed equally*
RPGeNet v2.0: expanding the universe of retinal disease gene interactions network.
Database, Volume 2019, baz120.

S. Castillo-Lara, E. Pascual-Carreras, J.F. Abril (2019)
PlanExp: intuitive integration of complex RNA-seq datasets with planarian omics resources.
Bioinformatics, *AOP.*

S. Castillo-Lara, J.F. Abril (2018)
PPaxe: easy extraction of protein occurrence and interactions from the scientific literature.
Bioinformatics, 35(14): pp. 2523-2524.

S. Castillo-Lara., J.F. Abril (2017)
PlanNET: Homology-based predicted interactome for multiple planarian transcriptomes.
Bioinformatics, 34(6): pp. 1016-1023.

D. Boloc, **S. Castillo-Lara**, G. Marfany, R. Gonzàlez-Duarte, J.F. Abril (2015)
Distilling a visual network of retinitis pigmentosa gene-protein interactions to uncover new disease candidates.
PLOS ONE, 10(8): e0135307