

# JESÚS VÉLEZ SANTIAGO

Genomic Scientist | Data Scientist

I love analyzing and visualizing data to improve our understanding of what is around us. Besides, I am fascinated by software development, and I hope to contribute valuable packages to the scientific community one day. I am known for being a passionate, curious person and be always open to new challenges. Do you have any challenges? Good! Let's do it. Let's be problem solvers.



## EDUCATION AND TRAINING

- 2021
- Datacamp Inc.**  
Data Scientist Professional 📍 Certificate  
  
The following knowledge was assessed:
    - Data Management
    - Model Development
    - Exploratory Analysis
    - Coding for Production Environments
    - Statistical Experimentation
    - Communication and Reporting
- 2017  
|  
2021
- National Autonomous University of Mexico (UNAM)**  
B.S. in Genomic Sciences 📍 Cuernavaca, Morelos, Mexico  
  
Thesis: Bacterial filamentation: a bet for survival in stressful environments

## RESEARCH EXPERIENCE

- 2018  
|  
2021
- Undergrad Thesis Student**  
Center for Genomic Sciences 📍 Cuernavaca, Morelos, Mexico
    - I combined mathematical models with experimental microbiology to understand how exposure to antimicrobial substances triggers bacterial cells' stress responses. I have mainly focused on postulating a mathematical model showing that cell elongation can promote transient resistance to individual bacterial cells by diluting the antibiotic's intracellular concentration.
- 2020  
|  
2021
- Developer of R Software**  
Universität Heidelberg 📍 Remote work, Germany
    - Over the years, many different regulatory networks and statistical algorithms have been developed, mostly in a fixed combination of one network and one algorithm. To systematically evaluate both networks and algorithms, we developed decoupleR, an R package that allows users to apply efficiently any combination provided.
- 2019  
|  
2020
- Assitant of National Researcher Level III or Emeritus**  
Center for Genomic Sciences 📍 Cuernavaca, Morelos, Mexico
    - Perform analysis of collections of massive expression experiments (e.g., RNA-seq) from *E. coli* using uniform bioinformatic pipelines that allowed comparison with the transcriptional regulation network's classical experimental knowledge.

## CONTACT INFO

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## SKILLS

Experienced in machine learning, statistical and mathematical modeling, data analysis, and data visualization.

Highly skilled in R, Python, Git, and Conda.

Last updated on 2021-08-22.

2019



### Bioinformatician and Genomist

Centré de Regulació Genòmica

Barcelona, Spain

- Differential expression analysis between the different conditions (e.g., deletions, overexpression, wild type) of transcriptional factors.
- Comparison of the expression profiles of genes regulated by transcriptional factors with the information available in *E. coli* gene regulation databases (e.g., RegulonDB).

2018



### Visiting Scientist

Center for Genomic Sciences

Cuernavaca, Morelos, Mexico

- Design of R programs for the study of the topological properties of the *E. coli* transcriptional regulatory network.



## PROFESSIONAL EXPERIENCE

2021



### Data Science Professor

Platzi Inc.

Remote work

- Complete design and planning of two data science courses.
- Creation of exams and support materials.
- Courses promotional writing.
- Courses promotional live class.



## TEACHING EXPERIENCE

2021



### Advanced Customization of Environment for Data Science

Platzi Inc.

[Link to my course](#)

Learn how to customize a data science workbench based on Python, Conda, and Jupyter Notebooks. With these tools, you will achieve harmony in your work environment and increase your productivity as a data scientist.

2021



### Jupyter Notebooks for Data Science

Platzi Inc.

[Link to my course](#)

Learn about the different types of Jupyter notebook, the fundamental work tool for any data scientist.

2021



### Teaching Assistant of “Analysis of transcriptomic data of single cell (scRNA-seq) with R and Bioconductor.” Course

Bioinformatics Meeting in Mexico 2021

[Course material](#)

- Provide support to students.
- Solve configurations of work environments.
- Guide discussions and exercises in breakout rooms.

2020



### Teaching Assistant of Linear Algebra Course

Center for Genomic Sciences

Cuernavaca, Morelos, Mexico

- Monitoring of student performance accompanied by personalized and group tutorials.
- Review of assignments and exams.




## HONORS AND AWARDS

- 2020 ● **Winner of first “Olimpiadas Platzi: Data Triathlon” – Platzi**  
Platzi Inc.  [Award link](#)
- 2020  
|  
2021 ● **Support Program for Research and Technological Innovation  
Projects (PAPIIT)**  
National Autonomous University of Mexico (UNAM)  Mexico
- 2019 ● **Program for Special Inter-institutional Cooperation Activities  
(PAECI)**  
National Autonomous University of Mexico (UNAM)  Mexico



## SELECTED PUBLICATIONS AND POSTERS

- 2019 ● **Filamentation: a bet for survival.**  
Poster for 2019 Fall School of Mathematical Biology (EOBM).  
 Merida, Yucatan, Mexico  
**Velez-Santiago J, Peña-miller R.**