# Luigui **Gallardo-Becerra**

Data Engineer & Bioinformatician

+1 619 602 0725  |  ✉ luiguimichelgallardo@gmail.com  |  🏠 luiguigallardo.github.io/web_page/  |  ⌨ LuiguiGallardo  |  in luiguigallardo

*Data Engineer and Scientist passionate about Big Data, Bioinformatics, and Machine Learning, looking for new challenges to apply and expand my skills.*

## About me

- In recent years, I participated in different projects using modern Genomic technologies (NGS), Data Engineering, and Data Science, to obtain novel information that culminated in high-impact peer-reviewed scientific publications".

## Experience

### Institute of Biotechnology, UNAM

Data Engineer                                                               *January 2019 - December, 2022*

I was part of different research projects, from the beginning, obtaining or creating the raw data, to the final report or publication. The tasks that I carried out includes the following:

- Management of research projects: participated in the creation of main and secondary objectives and research questions from different projects to obtain novel biological information useful for the scientific community
- Server management (HPC): managed the Laboratory's server, installed of Linux operative systems and specific software/packages, avoided server slowdowns, and built secure server environments
- Creation of pipelines: created pipelines to avoid repetitive workflows and make reproducible analysis using bash, python, Snakemake, and Rabix Composer
- Software development: developed several software tools to solve and achieve specific goals using bash, python, Perl, and R
- Creation of plots: using R, Rstudio, Jupyter Notebooks, Excel, Graphpad, and Tableau
- Maintenance of GitHub account (CI/CD): creation and maintenance of GitHub repositories
- Creation of reports/publications: using Markdown and Word, I delivered weekly and biannual reports to the members of the Laboratory. Also, I co-authored peer-reviewed publications that are highly cited in their respective areas
- Presentations to the general public and academic events: participate in scientific dissemination, specialized seminars, and congresses

### Appen

Data Analyst (Part-time)                                                      *October, 2016 - December, 2017*

I was an independent contractor and participated in several projects that included Data Sourcing and Annotation for different Appen clients (browsers, social networks, etc.). The tasks I performed were the following:

- Data collection and Preprocessing: obtention of raw data and its preprocessing before passing it to the final client or the Machine Learning Department
- Creation of weekly deliverables: for the final client or project manager
- Content translation: from Spanish to English or English to Spanish

### Department of Computer Science, CUCEI (UDG)

Software Engineer (Internship)                                                   *May, 2016 - July, 2016*

I participated in the creation of Scientific Software Development. The tasks that I carried out included:

- Creation of an API: using .NET, I created an API to save patients' records and images

**Institute of Biotechnology, UNAM**

Data Engineer (Internship)                                                                    *January, 2016 - July, 2016*

I participated in the research project "Microbiome of Pacific Whiteleg shrimp reveals differential bacterial community composition between Wild, Aquacultured and AHPND/EMS outbreak conditions". The tasks that I performed were:

- Big Data Analysis: using a HPC, Linux and bash, I analyzed the 16S rRNA information of several samples
- Creation of plots: using R, Rstudio, Excel, and Matlab
- Software development: I developed several tools for ETL data using bash, python and Perl
- Creation of paper: with the data obtained from this internship, I co-autored this paper

**Student Coaching**

Mathematics Teacher                                                                       *January, 2014 - December, 2015*

As a part-time teacher, I taught middle and high school students math classes to increase their grades or for college admission tests.

- Prepared group and individualized classes and lessons
- Applied weekly assessments for each student

# Education

**National Autonomous University of Mexico**                                                    *Cuernavaca, Mexico*

Ph.D.                                                                                  *January, 2019 - December, 2022*

**National Autonomous University of Mexico**                                                    *Mexico City, Mexico*

Master of Science                                                                      *August, 2016 - January, 2019*

**University of Guadalajara**                                                                  *Guadalajara, Mexico*

Bachelor of Biology                                                                     *August, 2012 - January, 2016*

# Soft skills

- Team player who can also work independently with excellent communication skills
- Fast learner and could quickly adapt to new technologies.
- Excellent problem-solving capabilities.
- Can manage a significant workload or several projects from different areas without losing track of them.

# Programing Languages, Tools & Bioinformatic skills:

- Python, R, SQL, Bash, Perl, C++, LaTeX, HTML & CSS, JavaScript, High Performance Computing (HPC), Google Cloud, AWS, Linux, Tableau, Docker, Snakemake, Jupyter Notebooks, Rstudio, Django
- 16S rRNA profiling, Genome/Transcriptome assembly and annotation, Metagenomics, Metatranscriptomics, Viromics

# Languages

- English – Full professional proficiency
- Spanish – Native