ROSAICELA ROMAN

RR

787.955.2855 | rrgomez2008@gmail.com | Gilbert, AZ 85298 | linkedin.com/in/rosaicelarg | github.com/rromang

OUTCOME-ORIENTED DATA ANALYST/SCIENTIST

Background in Biotechnology & Microbiology | 8 Years of Experience in Practical Application of Biology & Chemistry

Began career in lab and bring passion for data-driven decision making / deriving actionable insights. Easily (and clearly) communicate with all audiences, both technical and nontechnical – skill mastered while serving as Lab Supervisor with responsibility for commercial product development. Recently completed Data Analytics Bootcamp at University of Arizona and currently preparing for Data Scientist certification. Gained proficiency in Excel, Python, Pandas, JavaScript, HTML5/CSS, API Interactions, SQL/SQLite, Relational Databases, Machine Learning, and Deep Learning as well as foundation in:

Power BI & Tableau	VBA Scripting	Fundamental Statistics	Data Management
Front End Visualization	HTML, CSS, JavaScript	Project Management	
Troubleshooting	Problem Solving	Databases (PostgreSQL, ETL)	

Seeking to transition from hard science leadership role into data analysis, data analytics, and eventually, data science.

CORE COMPETENCIES

Qualifications: Strong Verbal and Written Communication Skills, Project Management, Program Management, Organizational Skills, Self-Learner, Time Management, Prioritization, Detail-Oriented, Accurate Data Entry, Data Analysis, Technical Writing, Cross-Functional Collaboration, Trend Analysis, Quantitative & Qualitative Analysis, Data Science, Critical Thinking, Self-Starter, Interpersonal Skills

Technical Skills: Microsoft Office Suite (Word, Excel, PowerPoint, Outlook), Flow cytometry: MACSQuant 16 and BD FACSAria II cell sorter; MACSQuantify 2.13 & FACSDiva software; Raman microscope (FTIR "sister technology") & Omnics software; Tecan Evo automated liquid handler & Evoware software; Eppendorf benchtop bioreactor & Biocommand software; Biolector microbioreactors & Biolection software

DATA ANALYSIS PROJECTS

Earthquake Modeling | https://github.com/rromang/earthquake_modeling | https://earthquake-ml-app.herokuapp.com
Extracted data from USGS website to create datasets for input to machine learning models. Prediction models created with ensemble Extra Trees Regressor method and TensorFlow.
- Tasks performed: Extract data from USGS website, create Flask app for website deployment, data exploration, model training, visualizations, deployment in Heroku
- Tools/languages: Python, Pandas, Flask, Matplotlib, Seaborn, SQLAlchemy, HTML

Earthquake API | https://github.com/rromang/earthquakes_api | https://equake-api.herokuapp.com
Extracted data from USGS website to create datasets for input to machine learning models. Loaded data to a sqlite database and PostGreSql. Loading from the database, a dictionary was created that was transformed into a json file and deployed using a flask app.
- Tasks performed: Database connection and query, Flask app deployment
- Tools/languages: Python, Pandas, JSON, Flask

Citibike | https://github.com/rromang/citybike_exploration | https://rromang.github.io/citybike_exploration
Used data obtained from citibikenyc.com to create a series of visualizations and ascertain potential changes in Citibike rental behavior from 2018 to 2020. Found drop in usage during the pandemic with unexpected increase in both distance travelled and female renters.
- Tasks performed: Created individual interactive graphs, technical summary, deployed HTML with Tableau visualizations
- Tools/languages: Python, Pandas, HTML, Tableau

Additional Projects | Took data visualization project https://github.com/rromang/leaflet-earthquake-mapping further with broadened data sets | Visualized data https://github.com/rromang/D3-Data-Exploration using Python

Heliae | Gilbert, AZ   **2014 – 2022**

Venture-backed biotechnology company focused on sustainability.

LAB TEAM SUPERVISOR (2019 – 2022)

Manage product development and testing in 2 of the company's 5 labs and supervised up to 4 employees. Took a data-centric approach to algology strain development and contributed to attainment of 2 patents. Achieved 30X improvement in strain productivity (biomass + growth rate).

- **Shared easily digestible data and created a variety of graphs and visualizations for company leadership to share with board of directors.**
- Translated complex scientific data / technical data into formats for non-technical decision makers.
- Operated in a field with virtually no research reference and successfully added 6 new microorganism strains with solid commercial potential.

SENIOR RESEARCH SCIENTIST (2018 – 2019)

Enabled the company to make data-driven decisions based on actionable insights and analysis of high throughput data. Based on completion of 2 strain development projects, recommended full adoption of an oil-based product (20% improved performance) with huge downstream potential revenue in animal and human nutrition. Personally managed routine production, experiment planning, and testing using specialized tools (flow cytometer, automated liquid handler, benchtop fermentation, etc.) typically utilized in other areas of microbiology/molecular biology.

RESEARCH ASSOCIATE (2014 – 2018)

Developed analytical toolbox that became the foundation for strain improvement project execution after realizing that the company needed a way to effectively analyze product performance. Analyzed numerous data sets to derive insights and designed formal methodology determine if the strains met requirements. Took on statistical analysis and made raw data meaningful.

- Credited with designing a novel ranking system with which to compare microbiological strains.

- Developed high throughput screening assays to identify improved strains made via strain evolution. Collected and analyzed data from flow cytometer and fluorescent activated cell sorting assays.
- Maintained integrity of original strains and improved overall quality, data integrity, and product flow.
- Played critical role in analysis of future strain improvement projects.

Spectrum Labs (currently dba Nextmune) | Phoenix, AZ   **Jan 2014 – Jun 2014**

Clinical laboratory serving local veterinary practices and hospitals.

INTERN

Served 6 months as an Intern while pursuing Certification in Biotechnology at Mesa Community College. Duties included initiating analysis of bacterial cultures from swab samples, performing Gram staining of bacterial cultures and identification assay of bacterial species using VITEK 2 system, testing for canine viral antibody presence in serum, performing MIC and MBEC assays to bacterial cultures, MRSA testing of cultures identified as S. aureus, and quality control inspection of veterinary allergen hypo-sensitization treatments.

South Mountain Community College | Phoenix, AZ   **2012 – 2014**

Public community college within the Maricopa County Community College District.

BIOLOGY INSTRUCTOR

Taught Introductory Biology class (lecture + lab) for nonmajors. Supervised all lab exercises and closely monitored student performance. Authored lesson plans and ensured that all core concepts were covered, understood, and applied in labs. Built reputation for engaging uninterested nonmajors and excelled in discussing complex concepts with an audience that often did not have a scientific foundation.

Experience Prior to 2012: Lived and attended law school in Puerto Rico.

EDUCATION

Data Scientist with Python Certification (in progress)	DataCamp	2022
Data Analytics Bootcamp	University of Arizona	2021
Master of Science in Toxicology	University of Michigan at Ann Arbor	2005
Bachelor of Science in Biology	University of Puerto Rico at Humacao	2003