Diego Luis Rivera Correa

diego.rivera23@upr.edu | +1 787-502-0936 | diego-rivera-correa

Education

Aug. 2019 – May. 2023

Bachelor of Science in Computer Science — University of Puerto Rico - Mayagüez (UPRM)

General GPA: 3.86/4.0
Major GPA: 3.92/4.0

Computer Science Coursework:

- Data Structures & Algorithm Analysis
- Database Systems
- Advanced & Object-Oriented Programming
- Software Engineering
- Computer Graphics
- Operating Systems & Computer Organization
- Human-Computer Interaction
- Programming Languages

Mathematics Coursework

- Calculus I & II
- Multivariate Calculus
- Discrete Mathematics
- Linear Algebra
- Elementary Statistics
- Statistical Data Analysis
- Stochastic Simulation

Skills

Programming: C++, Python, Java, JavaScript, PHP, HTML, CSS, LaTeX
Databases: MySQL, SQL, AWS-Redshift, PostgreSQL, PHPMyAdmin
Data Visualization: PowerBI, Excel, Python, Matplotlib, Seaborn, QuickSight
Tools/IDEs: DataGrip, VS-Code, XCode, PyCharm, Jupyter Notebook/Lab, Overleaf
Source Code Management / Automation: GitHub, GitLab, Jenkins
Operating Systems: macOS, Windows, Linux, iOS
Miscellaneous: Microsoft Word, Microsoft PowerPoint, Google Docs, Google Slides, Google Sheets, Google Drive
Languages: English, Spanish (Fluent in both)

Internships

May 2022 - Aug. 2022

Business Intelligence Engineer, **Amazon, Inc.**

- Used AWS-Redshift, PostgreSQL, and DataGrip to query and analyze a wide variety of large datasets.
- Wrote SQL code to build, maintain, and schedule data pipelines for analytics used in Amazon's Global Transportation Technology Services (GTTS) team.
- Created a database schema and built a QuickSight dashboard to monitor transportation configuration KPI metrics and alert Product Managers across GTTS.

June 2021 - Aug. 2021

Application Developer & Data Engineer, **American International Group, Inc.**

- Optimized data-gathering code with Ruby to examine >50k server checkpoints and compliance standards.
- Wrote queries using PostgreSQL to connect multiple relations and further analyze how managers are properly using their local business team application.
- Developed a Power BI dashboard to demonstrate outliers and group/label data for future compliance updates in business apps.

Jan. 2021 - May 2021

Data Scientist, **Andeno, Co.**

- Worked on historical transaction data using Jupyter Notebooks for user analytics and visualization.
- Performed multiple statistical tests on gathered data for algorithm improvement and outlier detection.
- Coded Python scripts for data labelling, cleaning, and extraction for predictive tendency models for hundreds of users.
- Used Python libraries: Pandas, Matplotlib, CSV, Numpy, Scipy.Stats, and Seaborn.

Academic and Personal Projects

Fall 2022 - Present

Web Developer, **uprm.edu/math**

- Advised by Dr. Edwin Flórez, Assistant Professor.
- Aided Prof. Edwin Flórez with the development of a webpage to illustarte UPRM's math department.
- Used WordPress and WPBakery to work on the Front-End Design of pages regarding UPRM's faculty and research.
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Fall 2022

Image Processing for Dynamic System Classification

- Using Python's NumPy and Matplotlib to simulate and represent different dynamical systems.

Spring 2022 - Present

Server Developer, **csmath.uprm.edu**

- Advised by Dr. Edwin Flórez, Assistant Professor.
- Aided Prof. Edwin Flórez with the development of a server intended for student use and project illustration in his Programming Languages and Database Systems course.
- Created Server and MySQL accounts to various students while learning a wide range of Linux commands.
- Organized a central HTML page were all student's public projects can be reached by using concise HTML and CSS code.
- Wrote PHP Code to connect student data-points in PHPMyAdmin and accept user input to create new student pages.

Spring 2022

WhatsApp Data Analysis

- Coding Python scripts using JupyterLab for cleaning and parsing over 160k messages spanning through 3 years into dictionaries with efficient tagging.
- Visualizing tendencies on how frequently messages are exchanged in hourly, daily, monthly, and yearly basis.
- Calculated the rate in which users send messages, as well as determining the user with the most messages and their 'busiest' message sending intervals.
- Implemented and tested SKLearn's DecisionTrees to classify messages and determine when would they be sent by.

Fall 2021

The NBA Draft: A Historical-Numerical Approach

- Developed a Python script that extracts data from around 4k NBA players and their accumulated counting and computed stats.
- Performed t-tests and f-tests using Python's stats module to compare if different NBA decade players can translate their statistics across different periods of time.
- Cleaned and pivoted data with Pandas and prepared a data pipeline to create data animations using Python's FuncAnimation library.
- Created a metric that combines all counting and computed stats that determines which NBA draft class is objectively better. According to Bleacher Report's studies, the results were 83.3 percent compatible with their results.
- Documented and kept track of all progress with LaTeX and Video updates. Project was made as part of the MATE4990 course.

Fall 2020

Front-End Developer, ***UPRM MoonBuggy Engineering Team***

- Redesigned the Buggy's web-page charts, sensors, and GPS by implementing carousels for improved UI navigation and response using Bootstrap.
- Enhanced data collection operations using JavaScript scripts to receive sensor information for a multi-purpose buggy for moon exploration.

Fall 2019 - Summer 2020

Robotics Researcher, ***NASA RASC-AL: UPRM EMPRESS***

- Designed a 3-way Close Point algorithm flowchart for sensor implementation on a lunar campaigning rover.
- Algorithm includes theoretical functions and usage for terrain, hydrogen, and chemical sensors, increasing the rover's mission timeline by nearly 20 percent.
- Team won 1st place in NASA's RASC-AL competition in overall presentation and design.

Leadership Experiences

Spring 2022 - Present

Developer, **UPRM Mathematical Sciences Department**

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Fall 2019 - Spring 2021

IEEE 8th Generation Scholar, **IEEE UPRM Chapter**

- Worked in fundraisers, assisted companies at Job-Fairs, and took/led various workshops (Résumés, Coding, etc.)
- Participated in weekly interview code-prep discussions with upper classmen and performed tutoring sessions in Caculus I-II, Linear Algebra, and World History.
- 1/10 chosen members from UPRM's 2019 freshman class.

Fall 2020 *Discover Trainee*, **Banco Popular of Puerto Rico (BPPR)**
- Selected to participate in the bank's first ever program for talented STEM students interested in Economics.
- Took part of technical workshops, networking, and mentorships in Management, Human Resources, and AI.

Honors & Certifications

Spring 2022	edX Machine Learning Course	edX
Spring 2022	Mathematics Department Honor Roll	UPRM
Fall 2021	FOCUS Scholar	Georgia Institute of Technology
Summer 2021	Statistics Foundations: Data Analysis Certification	LinkedIn Learning
Summer 2021	Statistics Foundations: Probability Certification	LinkedIn Learning
Summer 2020	1st Place: NASA RASC-AL 2020	NASA
Fall 2020	UPRM Engineering Dean's List	UPRM
Fall 2020	BPPR Power BI and Excel Certification	BPPR
Fall 2020	BPPR Discover Scholar	BPPR
Summer 2019	COS126 Scholar: Introductory Programming	UPRM & Princeton University
Summer 2019	College-Board Excellence Award (top 5% of test takers)	Dept. of Education - Puerto Rico