Joseph Gregory Z. Cabinta, RCh, MSc

Computational Scientist / Data Analyst

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TECHNICAL SKILLS

SQL | Python | Pandas | NumPy | Seaborn | Matplotlib | Power BI | Fortran | Excel | Jupyter | Bash

PROJECTS

Airbnb Revenue Analysis **|** SQL + Power BI

- Analyzed 146.5K booking records across 7.4K listings using SQL to uncover revenue losses, revealing a 20.6% drop in average revenue despite a 22% increase in bookings.
- Built interactive Power BI dashboards to visualize quarterly trends, host segmentation, and pricing dynamics, identifying Q2–Q4 as targets for 14–17% price optimization.

Apple Products Performance Analysis **|** SQL + Power BI

- Cleaned and analyzed 500K+ sales records using SQL, identifying a 29.4% sales increase despite a 3.2% drop in quantity sold, signaling premium pricing as a growth lever.
- Designed Power BI dashboards to track product category trends, revealing Airtags outpaced smartphone sales in 2021 but declined in 2022—prompting bundling and re-engagement strategies to address demand slowdown.

EXPERIENCE

Virtual Biochemical Exploration Lab, Institute of Chemistry, UP Diliman, Q.C.

Premier Computational Chemistry Lab in the Philippines

Graduate Researcher September 2022 – present

Research Topic: Metal Frameworks (MOF) for Water Treatment | Carbon Nanotubes as Distillation Alternative

- Optimized analysis of 10M+ simulation records by defining spatial boundaries with SQL CTEs, cutting processing time by 90% compared to sequential run workflows.
- Leveraged Python and Pandas to map pollutant proximity to MOF atoms, guiding design refinements that improved simulated removal efficiency by 46% (from 60% to 88%)
- Built a standardized pipeline in Python for assembling nanotube systems, reducing setup time to under 5 minutes and streamlining training for several undergraduate researchers through simplified, reproducible workflows.

Research Assistant January 2021 – August 2022

Research Topic: Monoterpenes as Biopesticides | Aerosol Formation Descriptors

- Centralized multi-resolution simulation outputs into a relational SQL framework, organizing over 4 TB of simulation data and reducing structure comparison by 1/10 of the original time.
- Identified dynamic regions in 20M+ molecular structures with Pandas and visualized displacement patterns using Seaborn, revealing trends critical to receptor selectivity.
- Leveraged Pandas and NumPy in Python to process 300M+ simulation data line entries, using grouping functions to analyze how mole fraction affects cluster sphericity and size—identifying miscibility as a key factor in influencing aerosol morphology.

SPEAKING & TECHNICAL WRITING HIGHLIGHTS

- Presented at 36th and 37th Philippine Chemistry Congress, annual conference of chemists in PH
- Published in Scopus-indexed international journals, ACS Omega and Journal of Physical Chemistry
- Conducted a hands-on session to 100+ participants on 3D data visualization techniques for interpreting complex chemical and spatial datasets

EDUCATION & LICENSE

MS Chemistry, University of the Philippines Diliman — September 2022 – December 2024

BS Chemistry, University of the Philippines Diliman — August 2015 – July 2020

Licensed Chemist**,** issued by PRC — December 2021