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 visualize category and regional performance, surfacing Airtags' 2021 surge and sales concentration in Brooklyn and Glendale—enabling targeted marketing strategies.

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