Cesar Malenab

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EDUCATION

De La Salle University

Master of Science in Data Science — September 2026

Master of Engineering in Civil Engineering — March 2022 – August 2023

- **Relevant Coursework:** Applied Machine Learning and Data Mining, Principles of Data Science, Data Visualization, Data Engineering and Cloud Technologies, and Quantitative Methods and Statistical Simulation

University of Santo Tomas — May 2017

Bachelor of Science in Civil Engineering

- Magna Cum Laude, Salutatorian

TECHNICAL SKILLS

- Proficient in Python (Pandas, NumPy, MatPlotLib, Seaborn, Scikit-Learn), Excel
- Intermediate with SQL (PostgreSQL), Tableau, Plotly-Dash, Visual Studio Code
- Exposed to AWS (S3, Glue, Athena, Lambda, IAM, boto3, awswrangler) and Git

PROJECTS

The Big One PH — December 2023

- Built an interactive data storytelling web application with **Plotly-Dash**, effectively communicating the seismic risks and healthcare accessibility in a post-earthquake scenario to audiences regardless of their background knowledge.
- Performed comprehensive data wrangling of 10 data sources using **Python** and calculated a score to consolidate multiple datasets into a single interpretable metric.

BoardGameGeek Recommender Data Pipeline using AWS — August 2023

- Architected and implemented an end-to-end data pipeline on **AWS** to streamline data processing and efficiently store 150,000+ board games and their features extracted using the BoardGameGeek API.
- Conducted exploratory data analysis to identify trends and actionable insights, culminating in the development of a content-based recommendation model to determine 10 similar games tailored to a user's single selection.
- Utilized **Tableau** to create an immersive dashboard that effectively communicates the recommendations and statistical insights of the top 5000 games, enhancing user engagement through interactive features.

Market Demand Analysis for Data Engineering Skills — December 2022

- Extracted and analyzed over 1000 job descriptions on indeed.com using **BeautifulSoup** and **Selenium** and modeled the data in **PostgreSQL** using **psycopg2** and **SQLAlchemy**, facilitating effective database management.
- Employed topic modeling to summarize the collected job descriptions into four distinct skill sets, enabling concise analysis of market demands.

Seismic Hazard Assessment using Monte Carlo Simulation — August 2022

- Executed Monte Carlo Simulation using **MS Excel** and **Python** to analyze earthquake patterns, leveraging a dataset spanning a century of earthquake records.
- Developed a Python framework to reduce analysis of simulated data from 15 minutes to 1 minute, resulting in ease of execution compared to spreadsheet calculations.

EXPERIENCE

Tandem Engineering Consultancy, Makati, PH — February 2018 – March 2022

Structural Design Engineer

- Optimized and standardized post-analysis calculations using **MS Excel,** resulting in enhanced design productivity and efficiency, and subsequently adopted as the office standard for projects.
- Managed a structural team by developing workload and project schedules using Gantt Charts, resulting in the successful completion of projects with two-week lead times.
- Collaborated with a diverse range of stakeholders by fostering open communication, ensuring seamless project delivery and alignment with business objectives.