

# 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, Advanced Mathematics, 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) and Excel
- Intermediate with SQL (PostgreSQL, Relational Database, Data Warehousing), Tableau and Plotly-Dash
- Exposed to AWS (S3, Glue, Athena, Lambda, boto3, awscli) 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 health care accessibility in a post-earthquake scenario in Metro Manila.
- Performed comprehensive data wrangling of 10 data sources using **Python** and calculated an accessibility 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 statistical simulation techniques to analyze earthquake patterns, leveraging a dataset spanning a century of earthquake records.

## 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 resulting in successful completion of projects with two-week lead times.
- Collaborated with a diverse range of stakeholders, ensuring seamless project delivery and alignment with business objectives.