Hans Jarett J. Ong | CV

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Education

Nara Institute of Science and Technology
D.Sc., Information Science   *2023 – Present*
Ongoing

University of the Philippines Diliman
M.Eng., Artificial Intelligence   *2022 – 2023*
Partial Completion

Ateneo de Manila University
B.S., Physics, Cum Laude   *2014 – 2019*
Minor in Data Science and Analytics Enterprise Systems

Research Experience

Nara Institute of Science and Technology   **Nara, Japan**
Research Intern   *Jan 2023*
- explored a novel causal discovery technique that determines the causal structure in the presence of unobserved confounders

Manila Observatory – Remote Sensing Group
Undergraduate Researcher with Dr. Nofel Lagrosas   *2016 – 2019*
- characterized aerosols using AERONET sun photometer optical measurements
- calibrated and validated MISR and MODIS satellite data using sun photometer measurements

Presentations

Japan Geoscience Union   **Chiba, Japan**
Oral Presentation   *May 2018*
Title: "Aerosol Types from 25 Southeast Asian AERONET sites obtained using specified clustering and Mahalanobis distance"

American Geophysical Union   **San Francisco, California**
Oral Presentation   *Dec 2016*
Title: "Determination of Monthly Aerosol Types in Manila Observatory and Notre Dame of Marbel University from AERONET measurements"

Professional Experience

Bank of the Philippine Islands
Senior Data Scientist   *May 2022 – September 2023*
- developed an investment propensity model enhanced campaign targeting, resulting in a notable 22% increase in assets under management (AUM) invested, surpassing previous campaign performance.
- designed a customer lifetime value (CLV) metric that captured both current and potential customer value.
- engineered a recommender system that uses customer profiles, life stage, and financial needs to recommend tailored investment funds.

Optum Labs (UnitedHealth Group R&D)
Data Scientist, AI Engineering Team   *Jan 2020 – April 2022*

- created several reusable data analysis tools which automated data cleaning, feature selection, feature engineering, analysis, and report generation
- developed internal SQL and report generation packages (in Python) complete with documentation and unit testing which became widely used for projects within the department
- conducted analyses and developed models for several health focus areas (e.g. maternal and infant health, ovarian and breast cancer, diabetes and obesity, etc.)

BPI-UHG Data Science (BUDS) Training Program

Data Scientist Apprentice   *Jul 2019 – Dec 2019*
- participated in a 6-month intensive data science training program that taught both theoretical foundations and practical applications of data science in healthcare and finance

Awards and Certifications

Scholarships and Grants

Monbukagakusho Scholarship   **Japan**
MEXT Scholarship   *2023 – 2026*

American Geophysical Union   **San Francisco, California**
Student Travel Grant, US$1,000   *Dec 2016*
Travel grant awarded to students with promising research.

Ateneo de Manila University   **Philippines**
Director's List Scholarship   *2014 – 2019*
Scholarship awarded to top 200 applicants.

Professional Certifications

John Snow Labs
Certified Spark NLP Data Scientist   *Jan 2022 – No Expiration Date*

Udemy
Interactive Python Dashboards with Plotly and Dash   *Aug 2020 – No Expiration Date*

Skills

Programming

- **Python**: jupyter, pandas, sklearn, PyTorch, OOP, package development, unit testing, etc.
- **R**: R Markdown, R Shiny, etc.
- **Miscellaneous**: SQL, Git/Github, MATLAB, C/C++, LaTeX

Analytics

- **Statistics and ML**: random forests, gradient boosting, neural networks, dimensionality reduction (PCA), power analysis, generalized linear models, SVM, propensity score matching, structural causal models, etc.
- **Deep Learning**: familiar with state-of-the-art models for image and natural language processing, e.g., AlexNet, VGG, ResNet, DenseNet, ELMo, BERT, T5, GPT, etc.