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PROFESSIONAL SUMMARY

Analytical and self-starter with 3 years of experience collaborating directly with Customer Experience & Service, Product, Marketing, and Technology teams. Passionate about empowering innovative companies through data-driven insights, effective communication, and actionable recommendations.

With a proven track record of delivering over 15 impactful case studies utilizing Statistical and Machine Learning techniques in Python and R, along with creating 50+ dynamic dashboards in Tableau and Power BI. Adept at spearheading and successfully executing projects with minimal supervision.

PROFESSIONAL EXPERIENCE

CONFIDENTIAL Consultant

**Makati City, Philippines
2023**

Led a Data Science team and served as a solutions architect for an American-based precision motion control systems manufacturer. The project focused on optimizing the predictive quality system for their assembly line.

- Achieved a 2x increase in annual rework hours savings (259 hours) and a 3.5x boost in rework cost savings (\$125,988) through the implementation of an improved predictive quality system. The enhanced system demonstrated ~18% better recall and 14% better precision, outperforming random guesses by ~9%.
- Introduced a prescriptive model utilizing explainability techniques, providing users with guidance on corrective actions while maintaining a validity rate of at least 80%.

PLDT GLOBAL CORPORATION Data Scientist

**Makati City, Philippines
2021 - 2022**

Served as the primary resource for driving insights to enhance Customer Service & Experience, Product, and Marketing strategies within a messaging and calling mobile application for Overseas Filipinos.

- Led a project to establish a comprehensive overview of the company's performance using a Balanced Scorecard approach.
- Profiled customers based on usage behaviour and engagement using segmentation techniques such as RFM model and K-Means clustering to improve customer value and experience.
- Identified cross-selling opportunities by employing Market Basket Analysis to discover products frequently purchased together, enabling effective bundling and upselling strategies.
- Provided critical sales, customer, and revenue forecasts to facilitate supply management and workforce allocation during non-peak hours.

Key contributor as the primary resource for data engineering, analysis, and visualization for a leading client in the Oil & Retail sector. Guided decision-makers in leveraging customer, transaction, and marketing data to enhance a loyalty program mobile application.

- Evaluated promotional reception to inform future marketing campaigns and product enhancements.
- Developed operational and executive-level Tableau dashboards for real-time business monitoring and fraud detection.
- Automated data extraction, transformation, and transfer processes using Python scripts, streamlining operations from sources like Google Drive to AWS S3.

PROJECTS

MACHINE LEARNING

2022 – 2023

Customer Purchase Propensity Analysis with Explainable AI

- Addressed customer drop-offs caused by product complexity and low purchase intent by leveraging Explainable AI. Explored key factors driving purchase decisions and identified actionable strategies to boost customer retention and conversions.
- Developed a predictive model achieving an 84% recall rate and 50% precision, using customer activity data within an e-Commerce platform.

RECOMMENDER SYSTEMS

2022 – 2023

Social Media Brand-Influencer Matching

- Leveraged the power of influencer marketing in the digital era by implementing profiling and content-based recommender systems to facilitate brand-influencer partnerships on Twitter.
- Classified a pool of Twitter influencers into three distinct groups—News and Entertainment outlet, Micro- or Macro-influencer, and Celebrity—using unsupervised learning techniques.
- Developed a content-based recommender system with an impressive average Normalized Discounted Cumulative Gain (NDCG) score of 0.90. This system successfully matched a brand with compatible influencers within each group based on tweet similarity, assuming that tweets reflected the ideals and perspectives of both the influencer and brand.

NATURAL LANGUAGE PROCESSING & INFORMATION RETRIEVAL

2022 – 2023

Enhancing Service Support Through Customer Concern Topic Modelling

- Explored methods to streamline service support for internet disruptions by categorizing user complaints. This approach aimed to expedite issue resolution and improve the overall customer experience.
- Scraped tweets directed at PLDT, the Philippine's leading internet provider, from their official Twitter page. Prepared the data by cleaning, vectorizing using TF-IDF, and lemmatizing for subsequent topic modelling.
- Employed techniques like Truncated SVD, Latent Semantic Analysis, and Non-Negative Matrix Factorization to uncover key customer concern topics, such as "Bad Customer Service," "Relocation Inquiry," and "Billing Concern."

DEEP LEARNING

2022 – 2023

Proactive Manufacturing Quality Control with Anomaly Detection & Explainable AI

- Enhanced quality assurance in manufacturing by employing anomaly detection through Computer Vision and explainable AI to identify rare product defects.
- Achieved a robust model with an AU-ROC score of 0.88, effectively addressing the challenge of detecting defects, including tiny dents, and considering multiple aspects of quality control.

MACHINE LEARNING OPERATIONS

2022 – 2023

Rapid Prototyping and Deployment with Streamlit

Utilized Streamlit to swiftly develop a prototype for a predictive and prescriptive quality solution in manufacturing. The prototype evaluates failed component test records, predicting their quality test outcomes based on features. In cases of predicted failure, the platform offers actionable recommendations for corrective measures to ensure component pass.

EDUCATION

Asian Institute of Management

MSDS Class of September 2023

Candidate for High Distinction Award

(CGPA of 4.4 or higher & Capstone Project grade of 4.5 or higher)

AIM Merit Scholarship Recipient

Makati City, Philippines

2022 – 2023

University of the Philippines Diliman

Bachelor of Science in Applied Physics (Instrumentation)

Quezon City, Philippines

2014 – 2019

OTHERS

Languages: Filipino, English

Software / Technical Skills: Python, R, SQL, Big Data Analytics, Spark, Streamlit, Gradio, Tableau, Power BI, Google Data Studio, AWS Services (e.g., S3, Glue, Lambda, Redshift), Docker, Roboflow, Snowflake, Google Analytics, LaTeX typesetting

Professional Development: DAP's SPARTA scholar

Specific Other Relevant Skills or Experiences: Research paper submission and Oral presentation in the *Samahang Pisika ng Pilipinas Physics Conference* (2018 & 2019)

Interests: Data Science Community Involvement, Open-Source Projects, Visual storytelling & Presentation, Mentorship, Sports (Chess & Badminton)