

Aaron Joshua E. Sison

📍 Manila, Philippines | 📞 +63 968 311 2467 | ✉ aaronjsisonbusiness@gmail.com
🌐 Portfolio | 🐙 github.com/sakudiff | 🌐 aaronjsison23

Education

De La Salle University Expected Graduation: Feb 2028
Bachelor of Science in Management of Financial Institutions Minors: Data Science | Financial Economics | GW: 3.3 / 4.0

Technical Skills

Programming	Python (Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, GeoPandas), R, SQL
Quantitative Methods	CAPM, Fama-French Factors, Rolling Beta, Annualized Volatility, DCF, Monte Carlo Simulation, Sensitivity Analysis, MAD Robust Z-Score
Statistical Modeling	K-Means Clustering, OLS and Logit Regression, ARIMA, Hypothesis Testing (Chi-Square, ANOVA, Pearson), Shannon Entropy, AHP, Weighted Scoring Models, Phillips ROI
Systems and Tools	MetaTrader 5, Git, L ^A T _E X, MS Excel, Figma
Languages	English (fluent), Filipino (native), Japanese (in progress)

Quantitative Research Projects

Econometric Industry Taxonomy for Philippine Policy Nov 2025
K-Means Clustering, Shannon Entropy, Python (Scikit-learn, GeoPandas)

- Built a data-driven classification of 228 Philippine industries using government census data and K-Means clustering, revealing that the country's uniform MSME policy ignores a structural reality where nearly half of all industries are trapped as hyper-fragmented micro-enterprises with no realistic path to growth. Published as open-source research with full reproducibility on **GitHub**.
- Engineered a three-feature structural fingerprint (average firm size, concentration of tiny enterprises, and presence of larger firms) to capture how industries are actually organized, then segmented the economy into four distinct archetypes using K-Means clustering, validated by a Silhouette Coefficient of 0.49 and bootstrapped stability of 0.97 confirming the taxonomy as statistically robust for policy targeting.
- Quantified each industry's internal structural diversity using Shannon Entropy, demonstrating that Survivalist industries (entropy of approximately 0.43) are trapped in fragile monocultures with near-zero capacity to absorb economic shocks, while Transition industries (entropy exceeding 1.0) possess the diversity needed to graduate firms from micro to SME scale organically.
- Conducted a spatial analysis across all 17 Philippine regions using GeoPandas, revealing that structural risk scores are compressed in a narrow range (0.93 to 0.95), indicating nationwide structural fragility that renders geography-based policy targeting ineffective without a structural lens.
- Established a correlation of 0.44 between the concentration of Survivalist industries and pandemic-era business closure rates, providing regulators with a replicable method for identifying at-risk industries before the next crisis and shifting from uniform MSME subsidies to targeted, archetype-specific interventions.

Human Capital Optimization: Mid-Sized Industrial Corporation May – Aug 2025
Operations Research, AHP, Phillips ROI Methodology

- Diagnosed critical new-hire attrition challenges through structured leadership interviews, identifying key improvement areas across onboarding, compensation structures, and performance management systems.
- Applied the Analytical Hierarchy Process (AHP) to prioritize four structural interventions. A structured 90-day onboarding program emerged as the highest-priority solution due to its operational feasibility and direct impact on retention.
- Designed a Total Rewards Framework based on the WorldatWork model, including a performance-based bonus formula tied to organizational profitability and individual Balanced Scorecard ratings.
- Projected a substantial ROI with a sub-one-year payback period using the Phillips ROI Methodology, supported by a financial model quantifying the significant cost savings from attrition reduction.

Talent Acquisition Optimization: Salmon Finance Philippines Apr – Jul 2024
Decision Science, Weighted Scoring Models, Strategic Implementation

- Evaluated competing recruitment channels using a weighted decision matrix across five criteria derived from executive interviews, revealing that cost-effectiveness and flexibility were the dominant selection factors (collectively weighted at 55%) for a capital-constrained fintech startup.
- Demonstrated that the University Partnership model (score of 7.8 out of 10) statistically outperformed the Creator Program (5.4 out of 10) and Cross-Industry Partnerships (3.9 out of 10), reducing recruiter dependency while building brand presence directly within candidate pools through on-campus engagement.
- Designed a four-phase implementation roadmap spanning university scouting, data-driven recruitment refinement, alumni ambassador engagement, and tailored internship program development, enabling a sustainable campus-anchored talent pipeline.
- Facilitated introductory discussions between company executives and university officials toward a formal partnership, converting the paper's central recommendation into an active institutional conversation.

Professional Experience

Sustainability Project Intern 2023
Enderun Colleges

- Supported compliance reporting for sustainable business operations across regulatory documentation requirements.

Leadership & Extracurriculars

DLSU Economics Organization 2024 – 2025
Core Finance Officer

- Processed organizational transactions and reimbursements, ensuring accurate financial record-keeping and compliance.
- Prepared and managed financial documents related to organizational expenses, reimbursements, and operational budgets.

DLSU Frosh Walk 2024 – 2025
Assistant Team Leader (ATL)

- Assisted in coordinating participating organizations and corporate sponsors for DLSU Frosh Walk 2025.
- Distributed promotional materials and freebies to incoming freshmen, facilitating a welcoming campus environment.

Certifications and Development

Lean Six Sigma White Belt	Council for Six Sigma Certification	2024
Japanese Language Study	Self-directed, targeting JLPT N1	Ongoing

Research Interests

Quantitative asset pricing, robust statistical methods in financial time series, regime-switching models, structural vulnerability in emerging market economies, Japanese equity markets and institutional market microstructure.