Mark Angelo Manacsa Pacheco

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EDUCATION

The University of Chicago — **Chicago, IL**
Master of Science in Financial Mathematics — **Expected: December 2025**

- Courses: Portfolio Theory & Risk Management, Python, Option Pricing, Probability & Stochastic Processes

National University of Singapore — **Singapore**
Bachelor of Mechanical Engineering with Honors (GPA: 3.76/4.0) — **June 2022**

- Secondary Major: Innovation and Design
- Specialization: Aeronautical Engineering
- Dean's List: AY19/20 Semester 1, AY19/20 Semester 2, AY20/21 Semester 1

SKILLS

Computing: C, Python, Jupyter, SQL Server Management Studio, MATLAB, MS Office, Power BI
Knowledge: Financial Markets, Data Analytics, Statistical Modelling, Econometrics
Trading Products: Commodities (Base Metals), Futures, Options

EXPERIENCE

Anglo American Marketing Limited Singapore Branch — **Singapore**
Trading Insights – Data Science — **April 2024 – August 2024**

- Researched opportunities to predict LME Copper prices using alternative Smelter data
- Improved Linear Regression model's forecast of Capesize positions by tuning hyperparameters
- Accelerated the development of onshore/offshore arbitrage calculator with data obtained from Bloomberg

Anglo American Marketing Limited Singapore Branch — **Singapore**
Market Risk — **December 2023 - March 2024**

- Developed and back-tested a beta-adjustment model of positions for risk factors, to improve hedging activities
- Conducted VaR (historical) sensitivity analysis and calculations to discover risk factors that drives changes in VaR for various desks
- Produced a Power BI dashboard which dynamically calculates the per-Unit-VaR of all Risk Factors

Anglo American Marketing Limited Singapore Branch — **Singapore**
Copper Concentrates Book Team - Physical Trading — **February 2023 - November 2023**

- Managed book position with the Book Manager to provide clear and accurate information to sales managers and operations as operational changes and deals occur day-to-day
- Reconciled book position (P&L and Exposure) against risk reports to ensure proper management of book
- Managed QP Options and QP Hedging of outstanding exposures in the Copper concentrate book to reduce price risk and lock in QP Spreads
- Facilitated running of Book Optimization Model to maximize PnL generated from purchase and sales

Anglo American Marketing Limited Singapore Branch — **Singapore**
Trading Analytics - Data Science — **August 2022 - January 2023**

- Explored and examined proprietary operational data to uncover business logic for usage in data science models
- Created Data Validation scripts to ensure integrity and cleanliness of data fed into existing optimization models
- Applied AGILE methodologies to deliver products incrementally to users rapidly
- Carried out Functional user testing and documentation as part of User Acceptance testing of digital products

EXTRACURRICULAR

National University of Singapore; Formula Society of Automotive Engineers — **Singapore**
Aerodynamics Lead — **August 2019 - May 2022**

- Led the Aerodynamics team to produce the Aerodynamics Package for R22, NUS FSAE's Formula Racecar
- Designed multiple Aerodynamic Components on SolidWorks, which were subsequently simulated and optimized using Computational Fluid Dynamics on StarCCM+
- Conducted Structural Finite Element Analysis on components using ANSYS to maximize rigidity and strength of components while minimizing weight