

WEI (WILLIAM) CHEN

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EDUCATION

UCBB Madison School of Management

Master of Financial Engineering

GPA: 3.38/4

Bar Bara, CA

December 2025

Relevant Courses: Fixed-Income Markets, Derivatives, and Machine Learning

The English University of Hong Kong

B.A., Business Administration, Minor in Statistics

Hong Kong

December 2022

Relevant Courses: Time Series, Deep Learning, and Non-Parametric Statistics

SKILLS & PROFESSIONAL CERTIFICATIONS

Technical Skills: Python (NumPy, Pandas, Scikit-learn, Polars and Numba), SQL, and Git

Certifications: SOA Exam QFIQF

Other Skills: Machine Learning, Natural Language Processing, and Monte Carlo Simulation

PROFESSIONAL EXPERIENCE

Proton Capital Management

United States

Quantitative Research Intern

June 2025 – September 2025

- Developed a systematic fixed income screening workflow using yield spread analytics across 500+ instruments, translating relative-value signals into actionable candidates for portfolio construction and research prioritization.
- Built a Python scenario engine for interest-rate risk analytics, attributing DV01 and convexity under parallel shifts, twists, and butterfly moves to support resilient portfolio management decisions.
- Automated daily risk reporting by aggregating Greeks across the book into a repeatable pipeline, reducing manual turnaround time by 60% while eliminating recurring reconciliation breaks.

General Life Insurance

Hong Kong

Actuarial Analyst

January 2023 – September 2024

- Designed an experience study pipeline on 200K+ policy records to quantify lapse and mortality dynamics, producing data-driven assumption updates supporting IFRS 17 reserving and business stakeholder reviews.
- Automated model validation workflows in Python to replace manual Excel processes, improving operational scalability and cutting the quarterly reporting cycle time by 40% with clearer auditability.
- Built scenario projection models for new product launches, quantifying capital requirements and embedded value sensitivity under stress assumptions to inform risk-aware planning and pricing decisions.

PROJECTS

Automated Earnings Call Sentiment and Return Prediction

- Fine-tuned FinBERT on 5,000+ earnings call transcripts and operationalized sentiment classification with 84% test accuracy, creating an ML layer suitable for scalable client-facing research workflows.
- Engineered cross-sectional signals from sentence-level tone and validated event-window performance, generating statistically significant 3-day abnormal returns of 1.8% in the top-quintile portfolio.
- Built an automated data ingestion and parsing pipeline using SEC EDGAR API and spaCy, reducing end-to-end processing time from hours to under 10 minutes per quarter.

Fixed Income Relative Value and Curve Trading Strategy

- Implemented a PCA-based yield curve decomposition into level, slope, and curvature factors, using residual-based analytics to surface relative-value opportunities across 2s5s10s and butterfly expressions.
- Backtested carry-and-rolldown strategies in US Treasury and swap markets (2015–2024), achieving Sharpe 0.72 gross with max drawdown of –6.3% over the full sample period.
- Added DV01-neutral position sizing and disciplined risk controls, improving risk-adjusted returns by 25% versus equal-weight allocation while reducing whipsaw trades by 35% using z-score filters.

COMPETITIONS

Morgan Stanley Quant Finance Challenge 2024 (Top 10 Finalist)

- Developed a dynamic delta-vega hedging framework for a structured equity product under stochastic volatility, minimizing P&L variance across 10,000 Monte Carlo paths with robust scenario evaluation.
- Designed a portfolio stress testing workflow across 8 macro scenarios, including rate shocks, credit spread widening, and equity drawdowns, to communicate resilience and key risk drivers clearly.