# ZHIYONG YAN (WAYNE)

**BBVA NEW YORK – SR RISK SPECIALIST | MSC – FINANCIAL RISK MANAGEMENT**

https://www.linkedin.com/in/waynezhiyong/

## AREAS OF KNOWLEDGE & SKILLS

**Finance**
- Financial Risk Management
- Portfolio Optimization
- Monte Carlo Simulation Pricing
- Financial Product Valuation

**Mathematics**
- Statistics
- Machine L earning
- Stochastic Processes
- Data Analysis & Management

**Programming**
- PYTHON
- C++, C#, R
- VBA MS. Excel
- SQL

## EDUCATION AND CERTIFICATION

**The University of Connecticut | U.S.** Sep' 2016 – Jun' 2018
*Master of Financial Mathematics* GPA: **4.00**

**University of International Business & Economics | CHINA** Sep' 2012 – Jun' 2016
*BSC – Business Japanese Minor: Finance* GPA: **3.88**

*CFA Level 1, FRM Level 1* In Progress

## WORK EXPERIENCE

**SR RISK SPECIALIST | BBVA New York** Jun' 2018 – Now
- Monitored risks of trading activities including Value at Risk and Greek Sensitivity for market risk(IR and FX risk) which is used for daily Volcker metrics report and internal audit.
- Implemented Resampling method for Stress test, Expected Shortfall calculation and risk factor evaluation.
- Supported Model Validation process by replicating models and addressed the comments from model validation team.
- Currently working on Risk Participation Agreement Implementation into risk System, checking valuation and credit exposure.
- Developed vba and python algorithms to generate daily integrity check report.
- Calculate credit exposure on request for daily basis.
- Systems used for daily work: Algorithmics® and Murex 2.11

**Crude Oil Option Valuation |** Sponsor: Echo Bay Partners [UCONN Capstone Project] Aug' 2017 – Nov' 2017
- Collected data from Bloomberg and CME group or other database API for futures and options.
- Compared different methods of volatility estimating accuracy.
- Utilized various methods including VIX estimation & several GARCH models (Python & R)
- Gained a 68% of R^2 accuracy for implied volatility model.

## RELEVANT ACADEMIC PROJECTS

**VBA Project**
- Implemented Logistic Regression with Altman's dataset. Used User Interface in VBA.
- Priced American Option using MONTE-CARLO Simulation.
- Priced OTC Exotic Bond: Range Accrual Notes (European, American, Callable Barrier) .
- Derived yield curve using Cubic Spline Interpolation
- Estimated Basket Default Swap Price using Gaussian copula Monte Carlo Simulation.

**Derivatives Pricing**
- Utilized different stochastic Process to simulate different objects(Volatility, Equity etc.)
- Black-Scholes Equation derivation using Martingale way and Replication way.
- Simulated American Option using Longstaff-Schwartz method to check early exercise.
- Applied Fundamental Theorem by obtaining state price in different world to calculate option price.

## OTHER CREDENTIALS

**Language**: English (TOEFL 106), Chinese (Native), Korean (Second Native), Japanese (JLPT N1)
**Certification:** Bloomberg Market Concepts, Coursera Machine Learning Certification