YU-TING CHEN

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EDUCATION

MS, Financial Mathematics, Florida State University, U.S.A. (GPA: 3.7) 2014 - 2016
MS, Finance, National Chiao Tung University, Taiwan (GPA: 3.7) 2009 - 2011
BS, Applied Mathematics, National Hsinchu University of Education, Taiwan (GPA: 3.8) 2004 - 2008

EXPERIENCE

- **Business Assistant** 09/2016 - 05/2017
  97Lemon Human Resource Consulting, South SF, CA, U.S.A.
  - Planned, coordinated and provided all administrative support, special projects and presentations
  - Communicated and collaborated with over 30 business partners all over the country
- **Quantitative Developer** 06/2016 - 08/2016
  QuantCalc Financial Math Calculator, http://www.quantcalc.net/
  - Developed calculators in Python for VaR evaluation, derivatives pricing and hedging in a stochastic volatility model on a quantitative finance website with 18,000 accumulated hits
- **Commodities Analyst** 10/2011 - 08/2012
  Yuanta Futures, Taipei, Taiwan
  - Closely monitored global commodities, energy, and financial markets, conducted research through analyzing data, and formulated market insights for the largest financial firm in Taiwan
  - Collected, compiled, and analyzed financial materials to form recommendations as customers' needs; forecasted oil prices and trends of commodities based on fundamental analysis and large data sets
  - Used Reuters market data platform and analyzed various multiple factors affecting price fluctuations to achieve maximum long-term profitability in a fast-paced work environment
  - Produced 5+ market reports via Excel each day for hundreds of clients and internal research; prepared market analysis and presentations delivered to 20+ senior portfolio managers
- **Teaching Assistant for Risk Management & Economics** 09/2010 - 06/2011
  National Chiao Tung University, Hsinchu, Taiwan
  - Delivered lectures covering VaR, Credit Risk, Stress Testing, and Principal Components Analysis
  - Designed, compiled materials, and developed lectures in both Microeconomics and Macroeconomics

PROJECTS

- **Portfolio Analysis of Eight Large Stocks in DJIA using Python**
  - Extracted, processed and analyzed 30+ years' stock prices and interest rates in Python
  - Forecasted the minimum variance, maximum return, beta and alpha of the portfolio using NumPy; optimized the utility function to conduct optimal portfolio and reasonable holdings
- **Variance Reduction for Monte Carlo Option Pricing Under the Heston Model**
  - Implemented 4 variance reduction techniques in C++; reduced the standard error by up to 99%; increased option pricing accuracy by a factor of 7; only used 1.6% of sample paths
  - Designed an efficient simulation algorithm combining importance sampling and control variates, which is 300 times faster than the plain Monte Carlo method
  - Analyzed the Euler discretization of the square-root diffusion process in Mathematica
  - Performed sensitivity analysis of each method; presented at http://www.quantcalc.net/Heston.html
- **Fast Fourier Transform-Based Option Pricing with Higher Order Convergence Rates**
  - Analyzed FFT-based pricing algorithms and 5 Lévy models used for exotic options pricing
  - Designed a modified algorithm with higher order convergence rates and less computational time

SKILLS

- **Technical:** Proficient in Python, C/C++, Mathematica, Reuters, Excel, Word, PowerPoint, Outlook, LaTeX; experienced in SQL, R, SAS, Matlab, SPSS, Bloomberg, JavaScript, HTML
- **Analytical:** Market Risk Analysis & Modeling, Quantitative Modeling, Monte Carlo Method, Martingale Pricing Theory, Stochastic Calculus, Statistical Analysis, Time Series Models & Forecasting
- **Financial:** Commodities, Derivatives, Portfolio Theory