Khanh-Tung Nguyen-Ba (Keane), CFA

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Education

The University of Iowa **December 2013**

- B.S. Actuarial Science, B.B.A. Finance, B.S. Mathematics, minor in Computer Science

Columbia University **Fall 2018 - Now**

- M.A. Statistics
- Coursework: Linear Regression Models, Statistical Inference, Statistical Machine Learning, Computational Statistics (PhD), Foundation of Graphical Models (PhD), Social Networks and Crowd Analysis, Neural Network and Deep Learning Research, Causal Inference (PhD), Neural Data Analysis (PhD), Reinforcement Learning (PhD)

Work Experience

Numerix LLC • *Lead Technical Product Manager* • New York, NY **6/2019 – 9/2020**

- Set up XVA overlay solutions for top-tier banks in North America, oversaw all phases of projects from data transformation, modeling of interest rate portfolio, setting up cloud managed service to final delivery
  Python, AWS, RESTful API, MongoDB, SQL
- Led a global initiative to build out new enterprise market risk solution, owned product roadmap, drove product design and shipment

Numerix LLC • *Financial Engineer & Actuary* • New York, NY **2/2016 – 6/2019**

- Conducted pre-sales demos and post-sales product management of Numerix Cross Asset applications and Python Software Development Toolkit, completed $10 million enterprise-level licensing deals in total
- Acquired modeling expertise for Equity and Interest Rate Derivatives, Fixed and Variable Annuity guaranteed benefits
- Collaborated with developers to set up and maintain a hedging platform for Variable Annuity and Fixed Annuity and Numerix enterprise-level XVA risk solutions.
- Built Risk Neutral, Real World and Nested Stochastic Economic Scenario Generator for insurance and asset management clients

Milliman Financial Risk Management • *Quantitative Analyst* • Chicago, IL **2/2014 – 2/2016**

- Specialized in providing dynamic hedging services to institutional clients including insurers, reinsurers and private equity firms, both within the United States and globally; Worked in a global team of actuaries, quants and traders on daily basis
- Produced nightly valuation, performed weekly attribution analysis, reserve calculation and stress testing for Variable Annuity blocks
- Worked as the only analyst supporting three consultants with setting up a new Variable Annuity hedging program from scratch for a block of business > $20 billion in Account Value

Research Experience

Learning New York City's main traffic hubs • Class Project

- Coded Hierarchical Poisson Factor model from scratch and applied to a transition matrix of New York traffic to learn the underlying aggregation states that are geographically meaningful [*GeoPandas, Pandas, Sklearn*]

Deep Learning for rheumatoid arthritis joint damage quantification • Machine Learning Competition

- Tailored YOLO v3 and Faster R-CNN algorithms to automate the scoring of joint damage due to rheumatoid arthritis [*PyTorch, OpenCV*]

Improving LDS using sequential variational autoencoder • Liam Paninski's Research Lab • *Research Assistant*

- Using LFADS to denoise spike rates to help SLDS learn better behaviorally-relevant brain states from neural recording of a monkey performing reaching task [*PyTorch, Bayesian modeling*]

Meta-Analysis of Cancer Oncology Researches • Generable Inc. • *Research Assistant*

DNA Probabilistic Genotyping • Legal Aid Society • *Pro-bono Research Volunteer*

Honors and Awards

Top Scorer in Vietnam College Entrance Exam (Mathematics, Physics and Chemistry) **Fall 2008**

- One of 20 students with highest score nationwide (out of 2 million participants)

Vietnamese Government Scholarship **Spring 2010 - Fall 2013**

- One of 40 top students sponsored by the government with $30,000 a year to study abroad