

NAM HOAI NGUYEN

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EDUCATION

- *PhD. Statistics, Rice University*, 2023 (Expected)
- *MPhil. Finance, University of Cambridge*, 2016
- *BS. Mathematics, Imperial College London*, 2015
Department rank: 7/~300; **Awarded the IMA Prize for outstanding performance in Statistics.**

TECHNICAL SKILLS

- **Programming languages:** R, Python, SQL, MATLAB, SAS, C++, Mathematica, Linux, git, LaTeX
- **Libraries/Frameworks:** Tensorflow, Numpy, Matplotlib, Pandas, Scikit-learn, ggplot2, Rcpp, Shiny
- **Software/Platform:** Presto, Snowflake, GitLab, Tableau, PowerBI

EXPERIENCES

Indeed Inc

Austin, TX

Product Scientist

May 2022 - Aug 2022

- **Project:** *Predicting long-term value of advertisers based on one-month data*
 - Conducted thorough literature reviews on the topic of customer lifetime value modeling.
 - Developed highly optimized RFM models on **Presto** to predict 18-month future revenues at both segment and advertiser levels.
 - Using data pulled from **Snowflake**, developed Machine Learning models in **Python** and **R** to predict 18-month future revenues of advertisers. The best model was able to handle extreme observations and detect non-spenders with a 91% accuracy.
 - Communicated the results with stakeholders, including high-level management, through both reports and presentations.

MD Anderson Cancer Center

Houston, TX

Graduate Research Assistant

May 2020 - present

- **Project:** *Bayesian Estimation of a Semi-parametric Recurrent Event Model of Multiple Cancer Types for Personalized Risk Prediction in Cancer Survivors (Advisor: Dr. Seung Jun Shin & Dr. Wenyi Wang)*
 - Developed a novel risk prediction model that allowed for recurrent cancers and competing risks from multiple cancer types.
 - Implemented the model in **R**. **Rcpp** was used for faster performance.
 - Performed MCMC on a high performance computing cluster (**Linux**) to estimate model parameters.
 - Integrated the new model to the lab's LFSPRO library ([github](#)) and the **Shiny** app ([github](#)) for used by genetic counselors.
- **Project:** *Validation of Cancer-specific and Multiple-primary-cancer-specific Risk Prediction Models on Clinically Ascertained Family Data (Advisor: Dr. Wenyi Wang)*
 - Collaborated with genetic counselors to assess and mitigate the effect of missing patients' ages and incomplete cancer history.
 - Evaluated the performance of the lab's LFSPRO library on a clinically ascertained dataset on the basis of AUC and O/E ratio.

Department of Statistics, Rice University

Houston, TX

Graduate Research Assistant

Dec 2019 - present

- **Project:** *Mathematical Modeling of Stem Cells and Their Descendants through Multi-type Age-dependent Branching Process (Advisor: Dr. Marek Kimmel)*
 - Derived closed-form expression for the evolution of cell population over time under different cell-type-specific dynamics.
 - Performed asymptotic analysis on the probability of extinction and the rate at which the population approaches extinction.
 - Performed simulation in **MATLAB** to confirm theoretical results.

Department of Statistics, Rice University

Houston, TX

Graduate Teaching Assistant

Aug 2019 - Dec 2020

- Courses: Introduction to Statistical Machine Learning; Probability and Statistics; Regression and Linear Models.
- Led weekly recitation sessions, graded homework and communicated with instructors to keep track of students' progress.

PUBLICATIONS

- **Nam H Nguyen**, Seung J Shin, Elissa B Dodd-Eaton, J Ning, W Wang, *Bayesian Estimation of a Semi-parametric Recurrent Event Model of Multiple Cancer Types for Personalized Risk Prediction in Cancer Survivors* (in preparation; **winner of the Best Student Paper Award by the American Statistical Association, 2022**).
- **Nam H Nguyen**, Elissa B Dodd-Eaton, W Wang, *Validation of Age-at-onset Penetrance Estimates on Clinically Ascertained Families with Li-Fraumeni Syndrome* (in preparation).
- **Nam H Nguyen**, M Kimmel, *Stochastic Models of Stem Cells and Their Descendants under Different Criticality Assumptions*, Stochastic Models, 2022 ([link](#)).
- P Bui Quang, T Klein, **Nam H Nguyen**, and T Walther, *Value-at-risk for south-east asian stock markets: Stochastic volatility vs GARCH*, Journal of Risk and Financial Management, 2018 ([link](#)).

CERTIFICATES

IBM Professional Certificate in Data Science (IBM) • Deep Learning Specialization (deeplearning.ai) • Machine Learning (Stanford) • Fundamentals of Computing Specialization (Rice) • A/B Testing (Google) • SAS Programmer Professional Certificate (SAS Institute)