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)