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**Education**

**Rice University, Faculty of Engineering** *Houston, TX, USA*

Ph.D in Statistics (4.0 GPA) *2019 – 2023 (expected)*

**University of Cambridge, Judge Business School** *Cambridge, UK*

MPhil in Finance (Merit) *2015-2016*

**Imperial College London, Faculty of Natural Sciences** *London, UK*

BS in Mathematics (First Class Honor) *2012–2015*

* Placed among top 10 students in the department for all 3 years

**Skills**

* R, R Markdown, Shiny, Sweave, Matlab, Python, SQL, LaTeX, Microsoft Office
* Coursera: Open Source tools for Data Science (IBM), Data Science Methodology (IBM), Python for Data Science and AI (IBM), Databases and SQL for Data Science (IBM), Data Analysis with Python (IBM), Data Visualization with Python (IBM)

**Experience**

**John von Neumann Institute, Vietnam National University** *Ho Chi Minh City, Vietnam*

**Research Fellow** *Aug 2017 – Apr 2019*

Project: *Modeling Yield Curves for the Hanoi Stock Exchange (HNX)*

* Using **Matlab**, performed high-dimensional outlier detection methods (KNN, Local Outlier Factor, Influenced Outlierness and PCA) to a real data set from HNX with over 170,000 observations

**VNG Corporation** *Ho Chi Minh City, Vietnam*

**Data Analyst** *Sep 2017 – Jan 2018*

* Using **R**, performed customer segmentation on a data set of more than 17 million transactions
* Used multivariate regression to identify predictors for the life-cycle and the life-time value of a customer
* Came up with personalized marketing strategies to lower costs and improve customer retention

**Projects**

**Statistical Analysis of Astronomical Data**  *Rice University*

* Obtained data from multiple sources. The primary dataset from the Jet Propulsion Laboratory had more than 800,000 observations and 51 features.
* Using **R**, performed web scraping to obtain data directly from the web and text mining to extract data from free text.
* Performed data preparation, data analysis and modeling using **R** and **SQL**.
* Applied **Machine Learning** algorithms to the data to build models that could predict orbital types and potentially hazardous asteroids. Built interactive visualization of the models using **Shiny**.
* Created a poster using **Sweave** and presented in a school conference.

**Asset Pricing Final Project** *University of Cambridge*

* Using **R**, tested the CAPM and the FF3F model on 25 portfolios using one-pass OLS and two-pass GLS regressions.
* Evaluated the model fit using the Gibbons-Ross-Shanken F-test and came up with recommendations to improve the model.

**Statistical Pattern Recognition Final Project** *Imperial College London*

* Performed dimension reduction (originally 28 dimensions) and dealt with missing values by imputation.
* Using **R**, built and tuned (by cross-validation) 5 **Machine Learning** models: QDA, CART, Logistic, KNN and Neural Network.
* Performed the McNemar test to statistically compare the KNN and the Random Forest models.
* Evaluated the models based on computational time, predictive accuracy and interpretability.

**Non-parametric Regression: On Kernel Smoothing and Support Vector Machines** *Imperial College London*

* Conducted research on the theory of SVM for linear and non-linear classification and regression.
* Using **R**, applied SVM to a real data set. Tuned the parameters, including the choice of kernel function, by cross-validation.
* Compared Kernel Smoothing and SVM on the basis of Root Mean Square Error.

**Awards and Honors**

* **VEF 2.0 Program recommended candidate (2018)** – awarded to top Vietnamese students after two rounds of interview with leading Vietnamese and US professors
* **IMA Prize (2015)** – awarded by the UK Institute of Mathematics and its Applications to two Mathematics students at Imperial College London for outstanding academic performance
* **CIFE Prize (2012)** – top-performing A-level students in the UK.
* **NetCraft Prize (2012)** – top 50 students in Computer Science nationally
* **Gold Certificate in Senior Maths Challenge (2010 and 2011)** – top prize in a national Mathematics competition
* **Edexcel Prize in Chemistry (2011)** – top 17 students in Chemistry nationally