# CONTACT

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# PROFILE

~~Lead Data Scientist and project manager for all Global Sales projects at RAD Analytics Lab.~~

# EDUCATION

2018

Georgia Institute of Technology, Atlanta GA

## Masters in Computer Science – Machine Learning Specialization

2016

University of California, Los Angeles CA

## Master of Mathematical Finance

2012

Birla Institute of Technology & Science, India

## Bachelor of Science in Engineering

**MANAGEMENT SKILLS**

* ~~Agile Development~~
* ~~Project and Team Management~~
* ~~JIRA, Trello, Git, Excel, Powerpoint~~

# TECHNICAL SKILLS

* Machine Learning
* Time Series Analysis
* Natural Language Processing
* Statistics and Probability
* Data Visualization
* Python Stack (Numpy, Pandas, scikit-Learn, TensorFlow), R, SQL, Apache Spark (NLP pipeline), SQL, AWS (Basic)

# EXPERIENCE

March, 2017 - PRESENT

**Financial Engineer / Data Scientist** | Intercontinental Exchange, Inc

* Application and comparison of Simple and multi-class logistic regression, random forest and k-nearest neighbors algorithms to classify mortgages into prepay, paying and default.
* Survival Analysis using semi-parametric (Cox Proportional Hazard Regression) model to estimate **relative impact of features and to estimate the probability** of loan survival or default rates.
* Created a **dynamic visualization tool** of 24hr time-series data (load Vs memory variable leakage, heap, thread count etc. of 500+ servers) using markdown rendering and dplyr.
* Built Data Comparison tools to check the daily tolerances and format of pricing, rates and portfolio analytics.

April 2018 – July 2018

**Data Scientist** | Method Data Science, LLC

* Developed a **recommendation system** to identify similar users from Yelp data set using **NLP algorithms**, **PySpark and Apache-Drill**. Pre-processing via Regex Tokenizer, StopWords etc. and recommendation via **TF-IDF** and **Word2Vec model**.

April 2016 – Nov 2016

**Quantitative Researcher** | Logica Capital Advisors, LLC

* Created **generic modules for data processing**, ranking and portfolio generation to accommodate custom risk factors.
* Developed a **framework in R for testing risk factors** such as price ratios, RSI and price proxy for value and momentum.
* Used Principle Component Analysis (PCA) to identify 7 most significant factors out of 19 that explain the variance in returns and applied KNN clustering on 1000 stocks to form co-integrated portfolios.
* Created a pair’s trading back-testing framework that uses co-integration heat-map of stocks, along with the implementation of Kalman filter and OLS regressions for dynamic hedge ratio of pairs.

**ACADEMIC PROJECTS**

* Context based weighting for the prediction of mortality in the ICU using **Long Short Term Memory Network** and a 5 layered **Deep NN** with an Adam optimizer and **20% dropout with an AUC ~90% and 98.5%** respectively.
* Applied Finance Project (The HOD Group, Luxembourg): Optimizing the existing multi-asset allocation system by overlaying dual momentum (VIX modulated) and market timing signals such as Absorption Ratio, Variance Risk Premium. Improved performance and better drawdown characteristics.