**SUMMARY:** shdkasljdkjsahdkjasgdjkasndjkhaskjdasjkgdajskhvdjhasbdjhagdjasbdhjsabjh

# CONTACT

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 github.com/rpothamLearner

# EDUCATION

2018

Georgia Institute of Technology, Atlanta GA

## Masters in Computer Science – Machine Learning Specialization

* Big Data in Health Informatics
* Artificial Intelligence
* Human-Computer Interaction

2016

University of California, Los Angeles CA

## Master of Mathematical Finance

* Computational Methods
* Financial Data Analytics

2012

Birla Institute of Technology & Science, India

## Bachelor of Science in Engineering

* Robotics

# TECHNICAL SKILLS

* Machine Learning
* Time Series Analysis
* Natural Language Processing
* Statistics and Probability
* Data Visualization
* Object Oriented Programming
* Programming Language:
  + Python Stack (Numpy, Pandas, scikit-Learn, Keras), R, Apache Spark (NLP pipeline).
* Database: MySQL, 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.
* Developed an on-premise server health monitor dashboard which provided intuitive and dynamic visualization of critical variables like (load, memory leakage, heap, thread count) for 500+ servers using markdown, html rendering and dplyr. Processed ~200GB of daily data.
* Developed multiple OOP modules to improve the efficiency of ETL process of agency data (~10m records; Fannie, Freddie Mac). Automated data feed quality verification like daily tolerances, price, agency ratings and portfolio analytics.

April 2018 – July 2018

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

* Developed a **recommendation system** to identify similar users using 6million Yelp user reviews using **NLP modules in** **PySpark MLlib and Apache-Drill Parquet** files for querying. Successfully restaurant recommendations. 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, improved turnaround time by 200%.
* Developed a **framework in R for testing risk factors** such as price ratios, RSI and price proxy for value and momentum.
* Performed Principle Component Analysis 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): Optimized the existing multi-asset allocation system by overlaying dual momentum (VIX modulated) and market timing signals such as Absorption Ratio, Variance Risk Premium. Improved the portfolio performance and drawdown characteristics.