Vignesh Rajakumar

vigneshr.93@gmail.com
 /vigneshRajakumar
 +1 647 762 2944
 /in/vigneshrajakumar
 Toronto

EDUCATION

- **Master of Data Science**   Sep 2020 – Present
  University of British Columbia   *Vancouver*
- **Bachelor of Computer Engineering; (Hons)**   Aug 2011 – May 2015
  National University of Singapore   *Singapore*
- **Chartered Financial Analyst**
  Passed the Level II exam at above 90th percentile

EXPERIENCE

- **Senior Application Developer**   Jul 2019 - Present
  Citibank N.A   *Singapore*
  - Drove design, implementation and testing of a low latency, micro-service based Java application with a Couchbase back-end, to bring Citi's infrastructure in line with client expectations
  - Deployed this greenfield product end to end in 12 months, replacing a complex legacy product in production for 10 years to improve Citi's position in the competitive market-space
  - Implemented automated monioring with XML-RPC to reduce Production Support manual intervention by 100% on non-critical errors
  - Executed the implementation of this product for North American markets, in addition to the APAC deliverable, to support the Global nature of Citi's clients
- **Application Developer**   Jul 2017 - Jul 2019
  Citibank N.A   *Singapore*
  - Re-engineered Citi's client connectivity platform for Global Equities with a 95% drop in end to end latency, enabling clients to react to market events quicker
  - Designed and delivered this solution for 2 markets end to end; managing Implementation, QA and User Testing
  - Achieved cost savings of $5 million by re-engineering the Quantitative Prime Brokerage pipeline and replacing a third party product
  - Designed and deployed an automated python reconciliation tool to parse through large log files to catch mismatches for reporting. Reduced report generation turn around time by 90%
  - Led a team of 4 analysts to implement an archival solution using AWS S3, to ensure archival methodologies are in line with MAS regulations
- **Data Analyst**   Jul 2015 - Jul 2017
  Citibank N.A   *Singapore*
  - Improved an existing email and scripting based reporting tool to a Elasticsearch and Kibana based dashboard for senior technology group meetings. This eliminated a 10 hour per month manual effort to gather this data
  - Implemented a Map-Reduce job on the Elasticsearch data to calculate latency breakdown for orders from large unstructured application log files to enable technology leadership to take decisions on infrastructure investments
  - Expanded this dashboard to include trading metrics like client breakdown, hit ratios and throughput; enabling traders to make informed decision to increase alpha capture

COURSE WORK AND PROJECTS

- **CFA**
  CFA Institute
  - Acquired in-depth knowledge of **Linear and Multiple Regression, Financial Modelling, Time Series Analysis, Hypothesis testing and Probability Theory**
- **Supervised Learning**
  Master of Data Science, University of British Columbia
  - Introduction to numerical optimization (e.g., gradient descent). Neural networks and deep learning
- **Advanced Machine Learning**
  Master of Data Science, University of British Columbia
  - Advanced machine learning methods in the context of natural language processing (NLP) applications. Bag of words, recommender systems, topic models, natural language as sequence data, Markov chains, and recurrent neural networks.

PROGRAMMING SKILLS

- **Languages**: Java, Python, R, C++, SQL, .NET
- **Technologies**: AWS, Spring Boot, MongoDB, Couchbase, PyTorch, TensorFlow