Rajesh Marudhachalam

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Professional Profile

Innovative and scientifically rigorous graduate student pursuing an MSc in Applied Computing (MScAC) at the University of Toronto with passion and a significant data science and analytics experience to bring to the table. With a team-oriented attitude, eager to apply his passion for data science in a research-centric role and contribute to enhance your firm's business efficiency, strategic goals, and profit.

Education

MSc in Applied Computing September 2022 – December 2023 (Expected)
University of Toronto, Department of Science
Courses (ongoing): Introduction to Machine Learning, Advanced Data Systems, Cloud based Data Analytics, Neural Networks and Deep Learning, Natural Language Computation

BTech in Computer Science and Engineering August 2016 – May 2020
Vellore Institute of Technology, School of Computer Science and Engineering
Accolades: *Merit Scholarship for Academic Excellence* **CGPA**: 9.27/10.0

Work Experience

JP Morgan Chase & Co, Bengaluru, India

- ***Software Engineer 2****, Wealth Management* *January 2022 – August 2022*
  - **Accolades:** Recognised under '*Execution Excellence*' category for Q1 2022.
  - Collaborated with product managers, data scientists & analysts and designed a data-lake that acts as one stop shop serving coherent and meaningful information to solve the intended business problems. This Datalake was built using the Hadoop ecosystem (HDFS on YARN clusters comprising of multiple compute nodes). This catered to the needs of analytics applications, and support a variety of structured, unstructured & semi-structured data making them more suitable for certain operations than narrowly focused data warehouses**.**
  - Built a Datalake in AWS using Redshift & S3 which will act as a one stop shop for all the data needed to solve business problems, and ported previously build custom spark based ETL framework to run on Amazon EKS.
- ***Software Engineer****, Wealth Management* *August, 2020 – January 2022*
  - **Accolades:** Recognised under '*Execution Excellence*' category for Q4 2020.
  - Solely developed custom ETL framework on PySpark that handles ingestion & transformation of terabytes of data on daily basis using metadata, it supports structured & unstructured data and connections with databases, APIs, flat-files, Json and HDFS to read & write data. Also, performs reconciliation - check for inconsistencies (schema changes) & data gaps - and sends this as data reports to the users.
  - Developed various SQL queries that can be used by business for on-demand data insights on MapReduce and MPP systems. And developed pipelines to feed the huge chunks of data from the data-lake to BI tools.
- ***Software Engineer Intern****, Asset Management* *January, 2020 – July, 2020*
  - **Accolades:** Recognised as one of the top 6 performers among the Asia-Pacific interns.
  - Built a React.js based dashboard currently being used by the asset management team across JP Morgan. This acts as a one-stop web portal that replaced the existing MS-Excel reports, thus making it much easier and more efficient for the end user to consume the same data. This was build using the React-Router & Redux. This dashboard also caches the data already fetched from API calls in an active session, and uses it to dynamically to replace an API call when the user tried to hit an already hit API endpoint

Heptagon Technologies Pvt Ltd, Bengaluru, India

- ***Data Science Summer Intern*** *April, 2019 – May, 2019*
  - Developed a model to determine the sentiment polarity of the data fetched from Twitter API. Developed python scripts to extract tweets and comments from Twitter, and performed NLP based Tokenization, Lemmatization, Vectorization and created higher dimensional word embeddings to capture fine grained relationships between tokens.

Acumen Technology Pvt Ltd, Chennai, India

- ***Web Development Summer Intern*** *April, 2017 – June, 2017*
  - Developed smooth and seamless login interfaces using HTML, CSS, PHP and Bootstrap, and reduced the overall webpage load time from 1.7 seconds to 0.6 seconds.

Skills

ML Libraries/Frameworks: Psycopg2, Numpy, Pandas, Scipy, Scikit-Learn, Matplotlib, GGPlot, Keras, Tensorflow, Nltk
Big-Data Technologies/Frameworks: Hadoop (Sentry & Ranger), Spark, HiveQL, Impala, Kafka, Sqoop
BI Tools: QlikSense, MS-Excel
AWS services: Lambda, EKS, Redshift, Sagemaker, EC2, Cloudformation
Databases: MySQL, PostgreSQL, SQL Server, Oracle (LDAP & Kerberos), MariaDB, Snowflake
Others: Git, Unix/Linux, React.js, HTML5, CSS3

Publications

- Selvakumar K, **Rajesh M**, Eshwar S, Shraveen B.S, 'YouTube Video Ranking: An NLP based system', *IJRTE, Vol-8 Issue-4, 2019, Page-1370-1375*. **(SCOPUS)**
- **Rajesh M**, 'Prediction of Survivors in the Titanic Cruise', IJRTE, Vol-8 Issue-3, 2019, Page-1268-1271. **(SCOPUS)**

Certifications

AWS Certified Developer Associate, AWS [view credential]	January 2022
Tensorflow Developer, Deeplearning.ai [view credential]	September 2021
Deep Learning Specialization, Deeplearning.ai [view credential]	June 2021
Applied Data Science Specialization, IBM - Coursera [view credential]	September 2020
Python for Everybody, University of Michigan [view credential]	July 2019