

# Rajesh Marudhachalam

Toronto, ON

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Experienced graduate student with passion for data science and significant analytics experience to bring to the table. With a team-oriented attitude, eager to apply my skill-set in 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 (MScAC)

September 2022 – December 2023 (Expected)

University of Toronto, Department of Science

Coursework (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, India, School of Computer Science and Engineering

CGPA: 9.27/10.0

Coursework: Statistics for Engineers, Calculus for Engineers, Linear Algebra, Discrete Mathematics & Graph theory, Data Mining, Natural Language Processing, Database Management Systems

**Accolades:** Merit Scholarship for Academic Excellence

## Work Experience

### University of Toronto, Canada

#### Teaching Assistant, CSC301 – Introduction to Software Engineering

September 2022 – Present

- Lead tutorials and delivered tech primers sessions for students.
- Performed the role of project mentor for student projects and supervised their progress through the course of the project.

### 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 data to solve analytical business problems, this was built using the Hadoop ecosystem (HDFS on YARN clusters). This system supported data in all formats, making them suitable for a broader range of use than the traditional narrowly focused data warehouses.
- Built a datalake in AWS using Redshift & S3 serving all the data needs to solve business usecases, and ported previously build custom spark based ETL framework to be 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, reducing the run times by 3 folds when compared to the previous process.

#### 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, this involved tokenization, lemmatization, vectorization to create higher dimensional word embeddings and 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.

## **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)* 

## **Skills**

**ML Libraries/Frameworks:** Numpy, Pandas, Scipy, Scikit-Learn, Matplotlib, GGPlot, Keras, Tensorflow, Nltk, Psycopg2

**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

## **Certifications**

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