# THOMAS GEORGE THOMAS

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## **SKILLS**

Programming Languages: Python, Scala, SQL, Unix shell scripting, Cypher

Big Data Technologies: Hadoop, Apache Spark, Hive, Impala, Sqoop, API, Streamlit, Control M, Heroku, Linux Amazon Web Services: S3, Athena, Glue, EMR, EC2, Lambda, Step Functions, Batch, SQS, Redshift, Boto3

Databases & Data Warehouses: Snowflake, Microsoft SQL Server, MySQL, MariaDB, SQLite, MongoDB, Neo4i, PostgreSQL

Packages: Pandas, NumPy, Scikit-learn, Matplotlib, Requests, BeautifulSoup, Multiprocess, Pytest, SQLAlchemy, Plotly, Anaconda

Data Visualization Tools: Tableau, Flourish, Data Wrapper, DBeaver, Jupyter Notebooks

DevOps & CI/CD: Agile, Git, Bitbucket, GitHub, Atlassian Bamboo, CRON, Maven, Confluence, Jira

Certifications: IBM Certified Data Science Professional

#### **EXPERIENCE**

Data Analyst February 2023 - Present

Northeastern University, Boston, USA

• Building a Dashboard for 20 Smart Homes showcasing uptime analysis, energy prediction, and KPIs on Plotly Dash and MariaDB

Data Engineer

July 2022 - December 2022

Montai Health, Cambridge, USA

Developed AWS ETL pipelines using Redshift, SQS, Lambda, EMR, EC2, PySpark, Athena, and Glue to transform 100 TB data

- Established health, drug, and bioinformatic Data Lake from RDBMS (SQL) and NoSQL databases on AWS worth 100 TB
- Created web scrapers to crawl data from CSVs, XMLs, Parquet, APIs, and FTP servers, leveraging Python to collect 5 GB daily
- Implemented CI/CD, test-driven development (TDD), and test automation on GitHub actions, increasing code quality by 100%

## **Senior Big Data Engineer**

June 2018 - August 2021

Legato Health Technologies, Bangalore, India

- Constructed data pipelines for 5 initiatives, including providing Clinical Investigative Insights in AWS, Hadoop, and Apache Spark
- Migrated 112 TB of data from on-premises Hadoop cluster onto AWS Cloud and Snowflake
- Innovated and automated post-migration validation reports in Spark Scala, leading to \$7000 quarterly savings
- Executed continuous integration and continuous deployment (CI/CD) pipelines for 4 projects deploying DevOps
- Chaired release management and code migration for production/pre-production environments for 5 projects

### Software Engineer - Hadoop Developer & Big Data Engineer

June 2016 - May 2018

Middle East Management Consultancy and Marketing, Muscat, Oman

- Shipped and delivered analytics product, leading to an increase in pharmaceutical finance sales by 12% annually
- Designed scalable data processing pipeline from data ingestion to reporting layer using Shell scripting & Spark worth 1.5 TB/day
- Implemented data sets transfer of 26 TB between Hadoop and MySQL RDBMS leveraging Sqoop
- Performed performance tuning in Spark, SQL, and Sqoop, resulting in a 60% response time reduction
- Restructured Data Lake design to utilize Parquet and Snappy compression to cut storage and compute costs by 30%

#### **EDUCATION**

#### Master of Science, Data Analytics Engineering

Northeastern University, Boston, Massachusetts, USA

**Expected December 2023** 

Relevant Coursework: Data Mining, Machine Learning, Data Management for Analytics

## **Bachelor of Technology, Computer Science and Engineering**

Manipal Institute of Technology, Manipal University, Manipal, India

May 2016

## **PROJECTS**

#### **Appliances Energy Prediction**

March 2023 - May 2023

 Predicted the energy consumed by appliances using custom-coded Machine Learning models and Algorithms like PCA, Neural Networks, Lasso, Ridge, and Linear Regression from scratch in Python with 80% confidence

#### YouTube Analytics Dashboard

December 2022 - March 2023

Created a real-time dashboard on Streamlit operating Python and YouTube API, picturing Sentiments and 5 KPIs for any video