**Wameedh Hammadi**

**Professional Summary**

<https://github.com/WameedhLFC>

I am a Big Data Engineer. I graduated from the University of Surrey, UK with a Master's Degree in Communications Networks and Software. During my studies, I had C++, Java, MATLAB, Web Services and Network Virtualization projects. Since then, I discovered that software development was my main area of interest and decided to pursue that passion at the earliest opportunity.

During my time at Revature, I developed outstanding skills in MySQL, Python and Scala and also had a deep exposure to Apache frameworks such as Hadoop, Spark, Kafka and Airflow. Also worked on multiple projects utilizing AWS EC2 and Cloudera Hortonworks Sandbox virtual machines and collaborated within big teams to perform ETL process, analysis and visualization of Big Data following the Agile Methodology.

Between September 2022 and May 2023, I joined Cognizant as an ETL Data Engineer. Initially, I was trained on Informatica PowerCenter, and upon my completion of two case study assessments pertaining to slowly changing dimensions types 1 and 2, I was selected as a Data Engineer for a project with Novo Nordisk (NNI) in November of 2022. Also completed multiple Udemy courses in that period covering a variety of big data technologies such as Qlik Sense, Tableau, Data Warehousing, Scala, Python and SQL. Learned about the various data sources we had in place (ZS, IQVIA and CDM) which were used by different teams (CDW, NBA and BI) and took training courses on HIPAA. Was a member of the CDW team and got exposed to some of the techniques adopted by other teams such as data modelling in Tableau and the use of performance tables. Was involved in producing, testing and documenting all the mappings and transformations performed on data pertaining to medications (products), HCP's, insurance companies, sales representatives, pharmacies, etc. We aligned these data to territories and used them to introduce a plan of action for sales representatives to follow and to detect certain behaviors. The raw data that came from various sources arrived at different intervals as CSV files stored on S3, which we then staged in Snowflake warehouse, processed and transformed using Informatica PowerCenter, created dimension, fact, normalized, history and other types of intermediate tables. Final data was unloaded back to S3 for users and other teams to consume for their purposes such as generating visualizations and reports. Was also involved in the discussions about requirements with providers of the raw data or whoever consumed our data after processing. Was involved in processing of the data coming from Veeva CRM warehouse. All activities in the Snowflake warehouse were conducted using the appropriate frameworks (staging, streaming, archiving, unloading, cloning, onboarding).

**Certifications**

QlikSense Visualizations Masterclass

Issued On : Dec 22, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-d39cbaa1-ea4b-4036-a5b1-afa80927be27/>

Certificate in Qlik Sense Analytics Development

Issued On : Dec 23, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-294ac808-ef00-4ec0-8424-1a543996a1bd/>

Informatica PowerCenter - Beginner to Expert Level

Issued On : Oct 21, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-482f9aab-e34e-4463-a41f-3bb9213cd022/>

Snowflake[A-Z] Zero to Hero Masterclass(Core+SQL+API+Visual)

Issued On : Dec 17, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-565803c7-da80-414a-ac8b-7d6006cc9d2e/>

The Python Bible™ | Everything You Need to Program in Python

Issued On : Nov 27, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-03155748-4cb7-4eb6-94d0-99e0d4852ba8/>

Microsoft SQL from A to Z

Issued On : Dec 20, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-5ef5fbcc-34f7-4a54-8099-0058db2dee33/>

The Complete SQL Bootcamp: Go from Zero to Hero

Issued On : Dec 21, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-79c737b1-d1b9-4134-bdd6-b302de3449a3/>

SQL Programming Basics

Issued On : Oct 8, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-4fae82b7-b6de-4620-a687-3aafcb511dcd/>

Data Warehouse Fundamentals for Beginners

Issued On : May 22, 2023

Online Transcript : <https://www.udemy.com/certificate/UC-e41e012d-89b7-4583-9fa6-f5fa3e59655f/>

Scala Applied, Part 1

Issued On : Nov 21, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-d7c2a288-c120-4826-ba77-c95eccff6843/>

Scala Applied, Part 2

Issued On : May 22, 2023

Online Transcript : <https://www.udemy.com/certificate/UC-341ecd5d-5cfd-4713-a68a-6ca799c0d048/>

Scala Applied, Part 3

Issued On : Dec 1, 2022

Online Transcript : <https://www.udemy.com/certificate/UC-626878b2-594d-46db-9df5-0c70397ecfe3/>

Tableau 2022 A-Z: Hands-On Tableau Training for Data Science

Issued On : May 22, 2023

Online Transcript : <https://www.udemy.com/certificate/UC-498b7d4d-40e7-4a73-8214-5721369e131f/>

**Education**

Master's Degree in Communications, Networks and Software, **Nov 2010**.

Bachelor's Degree in Electrical Engineering, **June 2001**.

**Technical Skill Summary**

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| --- | --- |
| Data Storage | RDBMS, NoSQL, MySQL, MongoDB, HiveQL |
| Languages | Scala, Python, C++, MySQL, Java |
| Big Data | Kafka, Hadoop, Hive, Apache Spark, HDFS, Qlik Sense, Informatica, Snowflake |
| Apache Spark | RDD's, Dataframes, Datasets, Spark SQL, Hive Context |
| Hadoop | Hadoop, YARN, HDFS, Hive, MapReduce |
| Other Technologies | AWS EMR, GitHub, Linux, Tableau, Power BI, Qlik Sense, Hortonworks Sandbox, HIPAA |
| Data Warehousing | Data Warehousing, Apache Airflow, OLTP and OLAP, Executors, Dimensional Modelling |

**Professional Experience**

**Cognizant Technology Solutions Sep-2022 to Apr-2023**

**Cognizant AIA / Novo Nordisk**

**Responsibilities:**

* After I joined Cognizant AIA in September 2022, I completed multiple Udemy courses covering Python, SQL, Scala, Spark, AWS, Tableau, Qlik Sense, Informatica PowerCenter, Data Warehousing and other Big Data technologies.
* After that, and upon passing two case study assessments pertaining to data warehousing and the implementation of SCD types 1 and 2 in Informatica PowerCenter, I was selected for a project with Novo Nordisk as a Data Engineer in November 2022.
* Received the work laptop and was granted access to Novo Nordisk Snowflake database in January 2023.
* Documented and got exposed to NNI databases, schemas, tables and the associated Informatica PowerCenter workflows.
* Became familiar with all the parties involved in data production and consumption as well as the storage locations of source and target data files.
* Was exposed to the process of requirements gathering and distribution along with all the associated discussions.
* Learned about Veeva CRM system utilized by NNI sales representatives with a focus on its back-end datasets.

**Environment:**

Python, SQL, Scala, Spark, AWS, GitHub, Data Warehousing, Informatica, Snowflake and other Big Data technologies.

**Revature Feb-2022 to Jun-2023**

**Projects:**

**Informatica PowerCenter Project:**

<https://github.com/WameedhLFC/WamPortfolio/tree/main/Informatica%20Project>

Worked on two case studies. In Case Study 1, the transactional data was received as a flat text file Claims\_transaction.txt and the Informatica PC workflow generated data that was stored in dimensional table TBL\_MEMBER, fact table TBL\_CLAIM and audit table TBL\_AUDIT in Oracle DB using SCD type 1. In Case Study 2, the transactional data was received as a flat CSV file Employee.csv and the Informatica PC workflow loaded the data to the dimensional table D\_Employee in Oracle DB and tracked all changes in employee data using SCD type 2 in the form of flagging, versioning and start date/end date.

**Responsibilities:**

* Created source tables flat files using Informatica PowerCenter
* Generated SQL test queries in Oracle Database
* Created SCD type 1 and type 2 mappings in Informatica PowerCenter
* Presented the working code to the manager and incorporated extra requested features.

**Environment:**

Informatica PowerCenter, Oracle Database

**US Census Data**

<https://github.com/mark-coffer/US-Census-Capstone>

US Census Data is a Big Data project that analyzes the United States population from 2000 to 2020 every decade. The data contains over 60 million records, is mined into cloud storage, and is queried to answer questions posed by the project manager. The conclusions drawn from the queries suggest future trends, such as population growth for the next decade. The queries were optimized using Spark and Spark SQL and shown visually with a data visualization tool.

**Responsibilities:**

* Teamed up with members of the cohort following Agile methodology
* Mined US Census Data using web scraping.
* Utilized Apache Airflow for workflow management.
* Stored the data into AWS S3.
* Further data processing and optimization was carried out on an AWS EMR cluster.
* Coded using Scala Spark and Spark SQL to find trends including future population growth.
* Used Tableau to visualize the data and demonstrate trends.
* Prepared PowerPoint slides and showcased my work.

**Environment:**

Scala , Spark SQL, Spark, Data Visualization

**Capstone Project - eCommerce and Insurance**

<https://github.com/Revature-Ajay-Insurance/Insurance-Capstone-Project>

Two teams (eCommerce and Insurance) will create Scala programs to publish their data to Kafka and consume the other team's data from Kafka. The eCommerce Team will create a Producer program in Scala to generate eCommerce data (for Orders). The team will have to create records on a continuous basis and publish them to a Kafka Topic (simulate a live stream of data). The Insurance Team will create a Consumer program to read data from the eCommerce Team's topic, process the data and run some analysis on the data, which will them be used for visualizations. Similarly, Insurance Team will create a Producer program in Scala to generate Insurance Claim data. The team will have to create records on a continuous basis and publish them to a Kafka Topic (simulate a live stream of data). The eCommerce Team will create a Consumer program to read data from the Insurance Team's topic, process the data and run some analysis on the data, which will them be used for visualizations.

**Responsibilities:**

* Collaborated within a team of ten associates and in partnership with another team of 9 associates using agile methods.
* Created a producer program for insurance data in Scala.
* Utilized Kafka and Zookeeper for proper data streaming over the application.
* Utilized Kafka consumer to ingest messages from a Kafka Topic.
* Deployed jar file to Hadoop environment to run the application and connect to Spark and Kafka.
* Executed SQL like queries on eCommerce data using Scala and Spark SQL.
* Output all analyzed results into a Data Visualization Tool.
* Presented the results of the analysis as a group.

**Environment:**

Hadoop, Scala , Kafka, Spark SQL, Spark

**Technology Project - Insurance Claim**

<https://github.com/PatriceMaxwell/Insurance-amp/tree/master>

Work in a team and create a Producer program in Scala to generate Insurance Claim data, which will then be loaded into Hive tables. Another team will also create a similar "producer" client application to generate their Insurance Claim data and load it into Hive. Your team creates a "consumer" application in Scala that will read the data generated by the other team and run some analysis queries on that data using Hive, Spark and SparkSQL. Similarly, the other team will create a consumer program in Scala to read the data your team generated and run some analysis on it Hive, Spark and SparkSQL.

**Responsibilities:**

* Created a program that loads a CSV file from the local machine to HDFS using Scala.
* Created a program that uses the CSV file in HDFS to build a Hive table using Scala.
* Generated an RDD from the CSV file in HDFS and used it to execute a query on insurance data using Scala and Spark on.
* Created a view of a dataframe and used it to execute a query on insurance data in SQL format using Scala, Spark and SparkSQL.
* Executed a HiveQL query on insurance data using Hive Context in Spark Session using Scala and Spark.
* Installed Hortonworks Sandbox virtual machine and utilized it to run jar files generated by the Scala code.
* Took part in daily standup meetings for my team as well as in meetings with other team we partnered with to discuss roles and responsiblities.
* Took part in the project presentation in which I showcased  the execution of 3 queries.

**Environment:**

Scala , Hive, Spark, Spark SQL, Hadoop

**Foundation Project - Python MongoDB**

<https://github.com/WameedhLFC/WamRepo>

A Python CLI (Command Line Interface) application. Data should be parsed from a CSV OR JSON file and persisted to MongoDB. The functionality of the application beyond that is up to the associates. Application Requirements: - Application must perform basic CRUD (Create, Read, Update, Delete) functionality with data stored in a database. - Application must be able to read JSON or CSV files, and store the data contained within those files in a database. - Application should have a CLI where users can interact with the application while it is running. - Other than those requirements, the kind of application you have is up to you. Tech Stack: - Python 3.x - File I/O - Collections - MongoDB - PyMongo - git SCM (+ GitHub).

**Responsibilities:**

* Created a Python Command Line Interface  banking application for user interactions.
* Utilized MongoDB to store data collections parsed from JSON files.
* Utilized PyMongo to access the functionalities of MongoDB in Python.
* The application performed a variety of CRUD (Create, Read, Update and Delete) operations on data.
* Application allows users to perform banking operation such as deposit, withdraw, transfer, close account , past transactions, etc.
* Implemented user input validation and error handling.
* Utilized the object-oriented programmimg concept of encapsulation to avoid code repetition.
* Submitted a MVP (Minimal Viable Product) 2 days prior to the final submission due date.
* Presented my project to a member of the Revature Quality Check team, my trainer and members of my Big Data batch.

**Environment:**

Python, MongoDB, PyMongo