

# Shubham Mallick

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Hyderabad, India

USA Business Visa (B1/B2)

Qualcomm Hackathon, Innovation Maestro, & Super-Qualstar Winner | Apple/PwC Awardee | Microsoft/IBM Certified Professional



# **Experiences:**

Present



July 2022



June 2020

## Qualcomm

November 2017



December 2016



October 2014



Cognizant

April 2012

# **Educations:**

- Master of **Technology** in **Data** Science & **Engineering** from BITS, Pilani.
- Bachelor of Technology in **Computer Science** & Engineering from W.B.U.T.
- Higher Secondary (12th) from W.B.C.H.S.E. with 84.10%.
- Secondary (10th) from W.B.B.S.E. with 85.37%.

## **Profile Summary: -**

- 12 years of extensive experiences in building highly scalable & distributed systems, and skilled in Software/Backend Engineering focusing on Big-Data Analytics, Cloud & Machine Learning.
- An experienced team leader (managed a team of 12 members of Supply Chain project at Apple), with excellent interpersonal skills, ability to work independently with multiple clients' simultaneously.
- Building ETL data pipeline application (including streaming data) in Big-Data eco-system using Apache-PySpark & Kafka. Creating schema-oriented Parquet files and load them into HIVE (external/internal table) and MapR DB using Python. Creating multi-threaded script for PySpark parallel processing.
- Experienced in delivering products based on Linear/Logistic Regressions, Classifications, Lasso, Ridge, Decision Tree, XGBoost, ARIMA Time Series, Neural Network, GAN, Text Mining, K-Means Cluster.
- Built ML models on image data using Tensorflow with Nvidia GPUs, and Text mining for value insight.
- Decomposing monolith application to microservices [API] based architecture using Docker/Kubernetes.
- Expertise in Huge Volume of data migration/ integration and implementing Data-Warehouse repository using SSIS, SQL Server, providing end-to-end ETL solutions with deployment to Azure Cloud, Data Analysis and SQL DBA, Azure API Management, Azure Web Apps, converting business requirements into technical solutions. Data visualization in web apps using JavaScripts, HTML.
- Handling unstructured & semi-structured data in XML, JSON using Kafka-Spark streaming.
- Passionate, positive, can-do attitude, and willing to take ownership of problems for full resolutions.

## **Achievements: -**

- Hackathon winner at Salesforce, and best CoP team awarded, in Oct-2022.
- Awarded for significant contributions on successful go-live of Apple's Supply-Chain project, in 2021.
- Stood in Top 3 in Qualcomm Worldwide Online Machine Learning Contest in 2019.
- Won the WINNER title of Innovation Maestro 2018-19 in Qualcomm OneIT, based on ML.
- Qualcomm OneIT HaQkathon 2018 winner, got chance to present my prototype to Qualcomm CxO.
- Went to final round in Microsoft AI Challenge India 2018, which was based on Bing search engine.
- Super-Qualstar awarded for rapid prototypes & executions on innovative ideas in Qualcomm.
- Qualstar awarded for rapid prototyping on an innovative idea using Python & NLP in Qualcomm.
- Qualstar awarded for optimized QCT Forecast Bias Model development using Python & Sklearn. QBuzz 2018 finalist. QBuzz is a platform organized by Qualcomm for new Innovative Paper-Presentation in cutting-edge technologies. I presented an innovative idea in AI/ML domain.
- Certificate for my contribution to OneIT Innovation Program using Machine Learning in Qualcomm.
- Microsoft Certified Data Warehouse professional, Data Warehouse in Microsoft SQL Server - (70-463).
- Client Appreciation Certificate awarded for outstanding performance in Data Migration in PwC.
- Appreciation Certificate "KUDOS" awarded for quick successful DM deliverables in PwC.
- "STAR Performer" awarded for outstanding performance in Data Migration project at PwC.
- Received Client Appreciation Certificate for outstanding performance in Data Analytics in PwC.

## Skills: -

Project 1	Big Data	MapR-Hadoop, Spark, HIVE, NoSQL, MongoDB, Kafka, Snowflake, YARN				
Project 2	Machine Learning	Supervised/Unsupervised Learning, Regressions, Classifications, Neural Network, TimeSeries, TextMining, NLP, LLM, Tensorflow/Keras, Scikit-Learn				
Other Tools & Technology	Cloud Technology	<ol> <li>Apple Cloud: Kafka, Redis</li> <li>AWS: EMR, EC2, Spark, S3, RDS, EKS, Docker, Athena, Airflow</li> <li>Azure Cloud: Blob Storage, Cloud SQL, Service Bus, C#</li> </ol>				
	Business Intelligence	SSIS / SQL Server Data Tool, SSRS, MSBI/ETL/BIDS, Data Quality Services (DQS), Data Cleansing, Data Modelling, Dashboards				
	RDBMS Database	Azure Cloud SQL DB, Azure BLOB Storage, Data Warehouse, SQL Server, Netezza, T-SQL, FreeText Search, MySQL, DBA, DB Isolation Level, Oracle, Performance Tuning, SQL Automation, Backup Strategy, OLTP				
	UI Framework	Azure Service Bus, Web Services, JavaScript, ASP.NET, C#, OOPS, WCF				
	Other Tech	Java, R-Studio, SSAS-Cube, MDX, Tableau/QlikView, Service-Now, JIRA				
	Tools	GitHub, Visual Studio, Version Control using TFS				



July 2022 - Present

Project: VDP (Vulnerability Data Platform), Sales AI

Role: Module Lead

#### **Details:**

- i. Gather business requirements in Agile/Scrum, collaboration with cross-team & stakeholder.
- ii. Building vulnerability management applications over high volume of data, and deploy in AWS.
- iii. Owning a module to rebuild the ticketing application with distributed systems with AWS through Kerberos security. Translating customer needs into technical solution.

Tools/Technology: AWS, Big-Data, Spark-Kafka, Redis, Python, Go, Airflow, MySQL, NoSQL, ETL, GraphDB

- iv. Proposed redesigned app, added data streaming, did PoC, & showed a demo to leadership.
- ٧. Architecting & re-designing data processing engines/pipeline to reduce overall latency/runtime.
- vi. Developing distributed data platforms & pipelines using Spark DAG, Airflow, Kafka, AWS-S3, NoSQL databases [document DB, key-value pair, columnar database, Graph-DB] & Grafana.
- vii. Using CI-CD pipeline, deployment through EKS, Kubectl/K8s, Terraform, Jenkins etc.
- viii. Building customs LLM & forecasting models, focusing on increasing Sales based on requirements.



Project: Global Allocation (Supply Chain Integration), CPT (Capacity Planning Tool), MDAT

Role: Tech/Team Lead, Module Owner

Tools/Technology: Apple Cloud, AWS, Python-Django, Big Data, Kafka, Redis, Spark, NoSQL, ETL, Snowflake

#### **Details:**

- i. Gather business requirements in **AGILE/SCRUM** methodology & implementation.
- Leading a team of 12 members on technology stack in Supply-Chain domain [DC-CPT] and mentoring ii. juniors/peers/cross-team members. Building custom ETL solutions using Spark.
- iii. Architecting backend data engineering pipeline using Spark/EMR/AWS from RDBMS/Oracle.
- Migrating current ETL process to Apache Airflow and AWS as per business requirements. iv.
- ٧. Developing scalable Kafka queues in Apple Cloud for data streaming throughout applications.
- vi. Building/Developing Analytics layer of application for data manipulation, used Redis cache.
- vii. Migrating data-lake from Oracle to AWS, using Snowflakes, Spark, HIVE, AWS etc.
- Experience in transformation of a monolith into micro-service [API] based architecture using Dockerviii. Kubernetes-Python-Django, deployed in AWS-EKS.
- Leading code reviews & documentation, collaborating with business stack-holders, cross-teams, and make the product delivered.
- Hiring people, building team for custom solutions.



**Project:** ECAP (Engineering Compute Analytics Platform) Role: Team Lead, Module Owner

Tools/Technology: Machine Learning, NLP, Hadoop, Spark, Python, HIVE, Kafka, Snowflake, Netezza

### **Details:**

- i. Demonstrating strong development processes in Agile. Also playing role as a Scrum Master.
- ii. Loading streaming data into MapR-DB in HDFS using Spark. Creating schema-oriented Parquet files, HIVE (external/internal table) using Beeline/Spark. Set-up message-brokers using Kafka.
- iii. Building ML models on image data using Keras, applied GAN. Training Neural models & tuning hyper parameters like Learning Rate, Epochs, Batch Size, Activation Function etc.
- iv. Building ML models for QCT Chipset forecasting using regressions (Lasso, Ridge, GradientBoosting, **XGBoost, DecisionTree**) from **scikit-learn**, & plot using **matplotlib**, **plotly**.
- Parameter tuning of ML models using GridSearchCV & RandomSearchCV. ٧.
- vi. Data Masking by Data Dictionary, Data Wrangling collected from Heterogenous sources.
- vii. Process and resources (CPU, RAM etc.) optimizations for Chipset in RTS using ML algorithms.
- viii. Experiencing in building solutions using Columnar databases, scraping data from QlikView dashboards, and loading into HIVE using Py-Spark. Worked on Log-Stash from 'ELK' stack.
- Building Big-Data-Pipelines in Hadoop Eco-System using Spark & MapR-DB for ML models. ix.
- Replacing ETL tool (like Informatica) using Apache-Spark data pipeline, scheduled on YARN. х.
- xi. Experienced in NLP models using Word2Vec, Glove, BERT models.
- xii. Collaborating with cross functional teams, mentoring interns, hiring people, building team.



Project: Project Oaktree (Azure Cloud Migration) Role: Team Lead & SME

Tools/Technology: Azure Cloud, Data Factory, SQL, Web ServiceBus, WCF, JavaScript, SSRS, MongoDB

### **Details:**

- i. Gather business requirements in AGILE/SCRUM method & design Data Model.
- ii. Data migration to **Azure Cloud** DB from heterogeneous legacy source systems, performing DBA tasks & end-to-end ETL solutions at Azure Cloud, along with DBA activities (Back up strategy and SQL jobs, Recovery mode, Performance tuning, Index rebuilding, Availability Groups).
- iii. Create MongoDB database, migrate DataMart from SQL Server to MongoDB using SSIS custom scripts, and process for Data Analytics.
- Deploy Azure Service Bus using C#.NET to interact with Broker message from client app, create C# iv. WCF web services interact with Cloud Database & deploy in Azure.
- Leading a team of 6 members and grooming juniors to make them industry ready. ٧.



Project: GCP-GDW & IPSR Role: Senior BI Developer

Tools/Technology: SQL, SSIS, ETL, DBA, C#, JavaScript, TFS, Free Text search, MongoDB, Python

#### **Details:**

i. Data Warehouse migration in AGILE/SCRUM methodologies, understanding business requirements
 & design Data Model for SQL Server Data Warehouse.

- ii. **Predictive search/Free-Text Search** (like Google search) from billions of rows in just 2-3 seconds from .NET application using C# web services & jQuery.
- iii. Create & deploy SSIS packages for Data Migration from heterogeneous source to SQL Server and provide end-to-end ETL solution. Performance tuning of SSIS (with SQL tuning) to load 50 million rows within limited time from remote data source to SQL server.
- iv. **Design Data-Mart** and load data from SQL Server DW through SSIS packages, developing **SSRS** and **PowerBI** report for Data Quality check, after & before Migration.
- v. DBA tasks (Back up strategy and SQL jobs, Recovery mode, Performance tuning, Index rebuilding, Availability groups), Integrate DQS (Data Quality Service) with SSIS.
- vi. **Developing C# WCF web** services to expose data to external clients.



Project: MetLife USBPM Role: Application developer

Tools/Technology: Visual Studio, SQL Server, T-SQL, SSIS, C#, ADO.NET, JavaScript, jQuery

#### **Details:**

- i. Production Support project of 24X7 hours for MetLife, handling **bulk production data & process to SQL server through SSIS** packages.
- ii. **Monitoring of running live Production jobs through IBM Tivoli/Maestro**, solving issues on **Ticketing System** on priority basis.
- iii. Automation of existing process to minimize day-to-day manual efforts & errors.
- iv. **Upgrade of existing SSIS packages, tuning existing Stored Procedures**, solving Production issues with priority as per **Business tickets**.



- Appointed as Mentor for newly joined folks for internships, and lateral joinee to Qualcomm.
- Active member of Core technical interviewers' panel for lateral hiring, and building team at Salesforce, Apple, Qualcomm, IBM & PwC.
- Appointed as a trainer for fresh campus hired graduates/associates from India's premier institutes on technical competencies (Analytics, SQL, Data-Warehouse, DB Migration, ETL), & received appreciation from Executive Director for quality training delivered at PwC.



- Online Job Portal System University Final Year Project
  - This is a web-based application developed in JAVA and Oracle 9i in 2011.
- > Online Air Line Reservation System IETE Training Institute (Summer Intern)
  - This is a web-based application developed in JAVA and Oracle 9i in 2011.
- Computer Retail Business Management IBM Certified Academy
  - This is a SQL/PL-SQL application developed in Oracle 9i in 2010.



Qualification University/Board		Marks Obtained						
M. Tech	BITS, Pilani	7.67 CGPA						
B. Tech	W.B.U.T.	7.86 CGPA						
12 <sup>th</sup>	W.B.C.H.S.E.	MATH	MATH PHYS		CHEM		BIOS	Overall
		195/200	15	2/200	167/2	00	165/200	84.10%
10 <sup>th</sup>	W.B.B.S.E.	Math		Ph. Sc.		Life Sc.		Overall
		91/100		95/100		88/100		85.37%



Hadoop, Big-Data, Machine Learning, Block-Chain, Cryptocurrency, Data Warehouse, Data Analytics, Business Intelligence, Python, R, Data Mining, Blog writing



> DOB : September 11

> Gender : Male

Language Known : English, Hindi, Bengali