



## Pratik De

### Experience Summary:

Have 13 years of IT experience in various domain.

### Key Project Experience & Roles :

**AWS Data Architect (2022 – Till Date):** Building complete data architecture for complete cloud migration from Oracle DB to AWS Cloud and support the structure and un-structure data. Phasing out Oracle. Migrating existing PL/SQL store procedure to Python using Python and helping the UI developers with functional and data expertise.

**ML & NLP Engineer (Aug,2022 – Till Date):** Client is world one of the leading providers of power generator and related parts and services. Project is about PDF and OCR text scanning from parts engineering documents and then build the relationship between parts and different feature extraction using NLP.

**Senior Data Engineer (2019 – 2022)** Working as Senior data engineer & analytics lead for data mining team in aviation business. Worked on data design and cleansing part for regression model. Worked with PostgreSQL and Oracle JSON query. Also exercising query optimization for big chunk of data. Worked on Report data and analytics. Completed Python 3.0 Certification and Completed Dataiku DSS Internal Training and POC.

**Business Analyst and Functional Architect and Data Integration/Analytics Lead(2017 - 19)** Worked as Business Analyst and Functional Architect for one custom logistics application(Both Web and Mobile) based on AWS. Design and Developed full table and data architecture(end to end) for whole system, data integration (inbound & outbound), data analytics system for this custom application. Requirement and discussion on Firewall policy for this cloud-based system. Built the input data(data mining part) to feed the prediction model(using regression and other ML algorithm) for logistics system.

**Developer for Oracle Transportation Management & Global Trade Management & Report/Data Analytics Developer (2015-2017) :** Data Integration from different ERP, Logistics & Location Mapping tool to OTM. Execute complete lifecycles for logistics system of power and turbine business. Worked on Custom Report Building, Data Segmentation, System and data base performance Tuning, Data Analytics part, Data lake part. Developed OTM technical and functional task like automation agent, screen set, virtual private data base configuration, supplier, service provider, leg calculation, shipment planning, tendering and Global Trade management activities and AES filing to different countries customs. Worked on Oracle Cloud migration and Oracle BI Publisher.

**Database & Oracle apps Developer (2011-15):** Worked as Lead PL/SQL Developer for building Oracle apps API for Inventory, Project, Costing module. Built and design staging database using ER data modelling approach. Design and Develop bulk load processes in Oracle. Data cleansing and filtering by Oracle PDQ tool(Data Lens tool). Oracle Apps function setup. Complete Technical and functional work in Oracle PIM module. Work on custom and standard Audit trail mechanism. Built an interface between excel and standard Oracle table using .NET. Worked on OAF page customization using JDeveloper. Worked in Complex Hierarchical query, Trigger and performance tuning. Report building for Healthcare Supply Chain business.XML mapping and Data integration API development.

### Current Position

AWS Data Architect and ML/NLP Engineer

### Contact:

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### Tools & Technologies:

Machine Learning and Data Science, Deep Learning, NLP, TensorFlow 2.0, Pytorch, IBM Qiskit, QSVM,QNLP,Quantum Kernel Training, QGAN,Google Cirq,AWS Braket,Dataiku DSS,Data Analytics, Tableau,Spotfire, AWS, Oracle Database, Greenplum, Oracle Apps, OTM, GTM, Oracle,PL/SQL,PostgreSQL,PDQ,SOA

### Languages:

Python, R, PL/SQL, PostgreSQL, C, C++, JAVA, KOTLIN, VB.Net

### Business Domain:

Supply Chain and Logistics, Aviation

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- **Key Project Experience & Roles(Continued..) :**

**ETL Developer (2010-11):** Worked as ETL Package developer with PL/SQL. Data Extract from legacy telecom CRM database to Oracle Staging database and then transformed into it SAPA ABAP compatible file and Loading Using SAP ABAP Commands to SAP Basis database.

- **Management and Mentoring Exp:** Team Management(Managing about 15 people aligned to 4 different Projects), Project Billing and Estimation, Training conducted for Database Management, Advance PL/SQL, C, Data Structure among different TCS Project accounts and different government engineering college. Self-dedicated mentor in a scholarship organization called Foundation For Excellence as an ex-scholar

**Data Science POC/Case Study/Hackathon:** Real time Object detection using Mask RCNN architecture on COCO Dataset, Worked with Facebook Detectro2 architecture .Face Mask detection using CNN and OpenCV, Autoencoder to denoise image using MNIST Fashion dataset, Emotion Detection Using TensorFlow 2.x and Gender Detection using CNN architecture, Convolutional Neural Network for classifying the images from Fer dataset, Worked on GAN architecture.

Placed 3 rd. in Data science hackathon within whole GE D&A account(Use Case was on NLP which can classify documents into categories based out of its contents). Currently working Intelligent and Natural Language Query based Chatbot POC using BERT and Transformer Architecture.

- **Quantum Computing and Quantum Machine Learning POC/Case Study/Hackathon:**QML-HACKATHON and Organized by - QUANTUM ECOSYSTEMS TECHNOLOGY COUNCIL OF INDIA (QETCI) .Use case- QML for Classification. The Goal of the use case was to detect legitimate vs theft user from defined data set. Tried QGAN to balance the imbalance dataset & built classification model using QSVM, Quantum Kernel Training, QuClassi (Custom QNN Algorithm).

QNLP-HACKATHON and ORGANIZER -WOMANIUM & QUANTINUUM ,Use case- Quantum Natural Language Processing with Lambeq. The goal of the project is to write, train and test a simple QNLP model that, given two sentences, can detect whether they belong to the same category or not.

PAPER SUBMITTED in SPRINGER NATURE- Topic -Electricity theft prediction using known Quantum Machine Learning Methods.

Currently finished one use case for fraud detection for credit card transaction using QML Methods(QSVC, Ensemble-QSVC, QKT based QSVC) by utilizing IBM 27 Qubit real time QPU and planning to submit as a paper. It is a part of open source challenge organized by IIT Madras and IBM Quantum Lab.

Working on POC for QGAN with multi feature dataset. Also I am taking part few more open source challenges and hackathon like finished IBM Spring Challenge 2023 for dynamic quantum circuit, unitaryhack2023 for some real time use case and issue solving for different quantum algorithms(Optimizer Function issue for Lambeq, AWS Bracket Issue, ZX –Calculus issue etc.).

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- **Certification Completed :**

Deep Learning Engineer with TensorFlow 2.0 – Edureka

Complete Python Bootcamp Python 3.0 – Udemy

QSilver Diploma – Qword

QBronze Diploma – Qword

Quantum Computing by IIT Madras-NPTEL

TCS Ascent Leadership Program

- **Certification Preparing for :**

AWS Certified Machine Learning – Specialty-AWS

Quantum Computation using Qiskit v0.2X- IBM

Registered for TCS Wings 2 Program(Senior Machine Learning Engineer)