






# Shashank Singhal

**Machine Learning Engineering Specialist**

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GCP Certified Machine Learning Engineer skilled in Machine Learning & Data Science with 7+ years of IT experience and 3+ years of experience in creating machine learning models and retraining systems and transforming data science prototypes to production-grade solutions. Consistently employs statistical methods and designs to yield real gains from model changes.

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## Skills & Tools

- Data Science
- Python
- Data Visualization
- Power BI
- Feature Engineering
- Exploratory Data Analysis
- Hadoop
- Hive
- MySQL
- PostgreSQL
- Big Query
- CloudSQL
- Apache NiFi
- Jupyter Notebook
- Big Data
- Sqoop

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## Experience

27/NOV/2023 – PRESENT

### **ML Engineering Specialist / Accenture, Pune**

- On bench.

01/APR/2022 – 17/NOV/2023

### **Digital TwinX – Product Engineer / TCS, Lucknow**

TCS TwinX™ combines cutting-edge research on artificial intelligence (AI) and actor model of computation to aid companies in simulating effective decision-making. The digital twin-based simulator helps construct hypotheses, model entities and test business decision outcomes in a virtual A/B testing mode. With insights based on behavioural changes of organizational entities and their situational responses at the n=1 level, TCS TwinX equips business leaders to accurately predict and simulate the future behaviour of entities for achieving holistic business goals.

- Created a workbench for performing various operations related to Machine Learning, such as Uploading data sets, performing EDA, feature engineering, model building, prediction, graphical analysis and deploying the models.

- Created Apache NiFi flow for reading data from GCP- Big Query and writing it to Postgres Database.
- Created NiFi flow for reading data from user-defined APIs and Publishing it to Apache Kafka.
- Developed Python APIs for creating NiFi Processors and managing their flow.
- Integrated Apache NiFi to TwinX Workbench.
- Created Safety Twin as a PoC model for one of the manufacturing industry market leaders.
- Hands-on experience in implementing and managing GCP data components such as BigQuery, Data Fusion, and Cloud SQL for data integration, transformation, and analysis.
- Collaborated with business users to understand their requirements and translate them into technical solutions, ensuring successful user acceptance testing (UAT).
- Developed and executed unit and integration testing strategies to ensure the quality and reliability of data processing pipelines and analytics solutions
- Leveraged strong SQL skills to optimize data queries, improve performance, and provide actionable insights to stakeholders.
- Code enhancement and performance optimization.
- Created CI-CD pipeline for creating wheel files.
- Documentation of the process.
- Analyzed work to generate logic for new systems, procedures and tests.
- Designed, developed, modified and debugged programs.
- Created proofs of concept for innovative new solutions.

**Tools Used:** - Big Query, PostgreSQL, Apache NiFi, Jupyter Notebook, Python, DBeaver, Data Visualization, GitLab, GitBash, Video Analytics, cloudSQL

01/JAN/2019 – 30/MAR/2022

## **iON ALM Intelligence Center – Software Engineering Module Lead / TCS, Lucknow**

- Developed Auto-Marking Solution to automatically mark the Answer sheets of audio, video and image formats.
- Developed a system to identify malpractices in the exam.
- Developed a module for monitoring the test centres, and students and completing examination procedures.
- Developed an algorithm to identify the nearest test centre for a candidate.
- Developed a system to distribute the Answer sheets to Markers (Teachers) and Reviewers based on rules.
- Designed a dashboard for candidates, to be used by students to register for the exams, download hall tickets, get results, certificates, score cards, view their answer books, and apply for reevaluation of the copies.
- Reviewed project specifications and design technology solutions that met or exceeded performance expectations.
- Worked with software development and testing team members to design and develop robust solutions to meet client functionality, scalability and performance requirements.
- Designed enhancements and updates for subsystems of end-user applications software running on local, networked and Internet-based platforms.
- Collaborated with fellow engineers to evaluate software and hardware interfaces.
- Represented the software applications engineering team during large and complex development projects.

- Reviewed code and debugged errors to improve performance.

**Tools Used:** - Jupyter Notebook, Python, Java, Eclipse, MySQL Query Browser, SVN, Jenkins, Devplus, SONAR, LP Solve, Data Visualization, Power BI.

29/MAR/2017 - 31/DEC/2018

## **iON Assessment Lifecycle Management - Developer / TCS, Lucknow**

Assessment Lifecycle Management is yet another solution of the iON Strategic Unit, which focuses on conducting flawless, uninterrupted, and fair online exams for competitive exams across the country and now expanding across the world.

- Designed, developed and implemented software applications for websites based on analyzed requirements and understanding of industry technical standards.
- Participated in performance analysis, design, development and testing.
- Troubleshoot various software issues by using debugging processes and coding techniques.
- Participated in requirements gathering and design development meetings.
- Performed unit testing, system testing and integration testing.
- Developed a Digital Marking solution for evaluating Handwritten copies over the Internet.
- Developed a system for conducting and evaluating OMR exams across places.
- Reviewed code and debugged errors to improve performance
- Handled production issues.
- Digitized the system for allocating supporting staff required for conducting an Online exam.
- Optimizing the solution to work with the extra load.
- Creating a secure system by using proper validations and checks.
- Developed and Deployed Digital Marking Solutions for Japanese and UK markets.
- Transitioned the solution from the JBoss server to the Wildfly server.
- Developing a Multilingual system which helps in expanding the software to other countries without a language barrier.

**Tools Used:** - Eclipse, MySQL Query Browser, JBoss Server, Struts2 Framework, SVN, Jenkins, Devplus, CRM, SONAR, Wildfly Server, Java, JavaScript, HTML, CSS.

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## **Professional Training Attended**

- Digital: Machine Learning
- Software Security Assurance: SSA Process Basics
- Digital: Building modern web apps at scale Expert Connects

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## **Achievements And Certifications Achieved**

- Google Certified Professional Machine Learning Engineer. 27<sup>th</sup> Dec 2022
- “Upcoming Talent Award ’18” in Annual International Meet TCS Innovation.
- Appreciation Award for “Solving the technical issues in the least time”.
- Process: ITIL Foundation Certification

- Process: Agile Way of Working Foundation.
- Certification of Completion from Udemy || An Introduction to Machine Learning for Data Engineers.
- Certificate of Completion from Udemy || Feature Engineering for Machine Learning.
- Certificate of Completion from Udemy || Machine Learning, Data Science and Deep Learning with Python.
- Certificate of Completion from Udemy || The Data Science Course 2022: Complete Data Science Bootcamp

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## Education

Examination, University/School	Percentage (Year of Passing)
B.tech (Electronics and Communication), PSIT College Of Engineering, Kanpur	68.74% (June 2016)
ISC Examination, St. John's School Marhauili, Varanasi	72.83% (2011-2012)
ICSE Examination, St. John's School Marhauili, Varanasi	77.14% (2009-2010)

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## Activities

- Content writer for Analytics Vidya and Geek Culture
- Proficient in Photoshop
- Photography

I hereby declare that all the information furnished above is true to my knowledge.

Date:

Place: