Shashank Singhal

Product Engineer – Machine Learning Engineer

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Machine Learning Engineer skilled in Machine Learning & Data Science with 5+ years of IT experience and 2+ 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.

Skills & Tools

- Data Science
- Python
- Data Visualization
- Power BI
- Feature Engineering
- Exploratory Data Analysis

- MySQL
- PostgreSQL
- Big Query
- Hadoop
- Hive
- Sqoop
- Apache NiFi
- Jupyter Notebook

Experience

01/APR/2022 - PRESENT

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 hypothesis, model entities and test business decision outcomes in a virtual A/B testing mode. With insights based on behavioral changes of organizational entities and their situational responses at the n=1 level, TCS TwinX equips business leaders to accurately predict and simulate future behavior of entities for achieving holistic business goals.

- Created 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 its flow.
- Integrated Apache NiFi to TwinX Workbench.
- Created Safety Twin as a PoC model for one on the manufacturing industry market leader.

- 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

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 centers, students and complete examination procedure.
- Developed an algorithm to identify the nearest test center for a candidate.
- Developed a system to distribute the Answer sheets to Marker (Teacher) and Reviewers based on rules.
- Designed dashboard for candidates, to be used by students for registering the exams, downloading hall tickets, getting results, certificates, score cards, view their answer books, and apply for reevaluation of the copies.
- Reviewed project specifications and designed 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 requirements for functionality, scalability and performance.
- Designed enhancements and updates for subsystems of end-user applications software running on local, networked and Internet-based platforms.
- Identified and documented project changes with proactive budget oversight.
- Collaborated with fellow engineers to evaluate software and hardware interfaces.
- Provided guidance and mentored less-experienced staff members.
- Represented 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.

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29/MAR/2017 - 31/DEC/2018
iON Assessment Lifecycle Management - Developer / TCS, Lucknow

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

- Designed, developed and implemented software applications for website based on analyzed requirements and understanding of industry technical standards.
- Participated in performance analysis, design, development and testing.
- Troubleshot 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 Digital Marking solution for evaluating the Handwritten copies over 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 extra load.
- Creating a secure system by using proper validations and checks.
- Developed and Deployed Digital Marking Solution for Japan and UK markets.
- Transitioned the solution from JBoss server to Wildfly server.
- Developing a Multilingual system which help in expanding the software to other countries without language barrier.

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

Professional Training Attended

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

Achievements And Certifications Achieved

- Google Certified Professional Machine Learning Engineer.
- "Upcoming Talent Award '18" in Annual international Meet TCS Innovation.
- Appreciation Award for "Solving the technical issues in 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 Marhauli, Varanasi	72.83% (2011-2012)
ICSE Examination, St. John's School Marhauli, Varanasi	77.14% (2009-2010)

Activities

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

I hereby declare that all the information furnished above are true to best of my knowledge.

Date:

Place: