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Pune, Maharashtra

Mohammad Irshad Khan

Data Science Manager / TCS

Career Summary

- Results-driven Data Science Manager with 5 years of experience of building and empowering high-performing cross-functional data science teams.
- Proficient in data science project management methodologies **CRISP, DDS**, Agile and Scrum, to drive effective knowledge discovery and collaborative project management.
- Adept at extract actionable insights from complex data and translating business needs into actionable insights through the entire data science lifecycle.
- Proven ability to build and lead teams in creating robust Machine Learning and Deep Learning models, including CNN, RNN, LSTM solutions to meet business objectives.
- Strong leadership and management skills in various data analysis and modeling techniques, including feature selection, regression, clustering, classification, and neural networks.
- I have expertise in Python, SQL, advanced statistical methodologies and machine learning techniques to deliver impactful solutions while bridging the gap between technical and business stakeholders through continuous communication and collaboration skills.
- I am passionate about staying abreast of emerging technologies and industry trends to continuously enhance team capabilities, fostering promising talent through training and mentorship to elevate team expertise and performance to deliver impactful business solutions.
- Hands-on experience of Descriptive, Diagnostic, Predictive, Prescriptive, Exploratory Data Analysis, Inferential Statistical analysis, Hypothesis and A/B testing

Certifications / Awards

- GCP Professional Machine Learning Engineer
- GCP Cloud Digital Leader
- Microsoft Azure Data Scientist Associate
- Organization Certified Agile Champion
- Lean Six Sigma Green Belt

Skills

Natural Language Processing (NLP): I am skilled in using NLP libraries like SpaCy, NLTK, and Hugging Face Transformers for text classification, text extraction, document tagging, categorization, clustering, sentiment analysis, AI and Prompt Engineering for different languages, methods and solutions.

Machine Learning application: I am hands-on experience in various machine learning techniques including object detection, image and document/text classification, Computer Vision, language modeling, sentiment analysis, time series analysis, and statistical analysis.

Machine Learning techniques: Decision tree, Random Forest, XGBoost, SGDClassifier, Support Vector Machine, Ensemble Bagging and Boosting, Artificial Neural Network, Clustering etc.

Deep Learning: Convolutional Neural Network, RNN, LSTM, Function Layers, activation functions & callbacks in ANN, YOLO, MobileNet, Encoder/Decoder, Transformers and word2vec, etc.

Tools and Libraries: Python 3, TensorFlow, Keras, Scikit learn, NumPy, Pandas, SpaCy, NLTK, DataPrep, Matplotlib, Python Jupyter Notebook, Python Spyder IDE, Tableau, Power-BI, Gen AI and LLM etc.

Programming Languages and Big Data Architecture: Python, PL/SQL

Big Data Architecture: Hadoop, HDFS, Hive, Spark, MapReduce

Project Management: Agile-Scrum Management, Stakeholders Management, Budget, Project and Resource Management, Business Analytics, Decision Making and Problem Solving, Collaboration and Relationship Building, Cloud Resource Management, Change Management and Adoption, Data Infrastructure and Governance Management

Cloud Management: GCP, AWS Redshift, S3, Azure Databricks, Auto-ML, Big Data and VMs

Experience

Data Science Manager TATA Consultancy Services (TCS) 01/2019 – Present

- Understand and document the analytic needs of business users.
- Work with huge volumes of data to solve real-world problems that feed into our platform to be used by downstream applications.
- Mine and analyze data from corporate databases to optimize and improve product development, marketing techniques and business strategies.
- Assess the effectiveness and accuracy of new data sources and data gathering techniques and develop custom data models to apply to the data sets.
- Develop and define project scope, objectives, and deliverables in collaboration with stakeholders.
- Establish a detailed project plan, including timelines, milestones, and resource allocation.
- Assemble cross-functional teams comprising data scientists, analysts, engineers, and other key stakeholders.
- Facilitate regular meetings to review project progress, obstacles, and next steps.
- Act as the main point of contact between stakeholders, including senior management, clients, and the data science team.
- Prepare and deliver regular project updates through presentations, reports, and dashboards.
- Oversee the creation of project documentation, including project plans, code documentation, and user manuals.
- Ensure proper archiving of data, codes, and models for future reference.
- Experience working with Big Data Technologies: Apache Hadoop, Apache hive & Apache Spark
- Translate business questions into clear and solvable data science problems and Maximize value of existing data assets
- Working with business on translating broad problem statements to solvable data science problems
- Understand Data Science Algorithms & Coding complexities pre-processing and feature engineering to problem modeling and Hyper parameter tuning.

Project Summary

- Executed a project to optimize loan approval processes using predictive analytics. Developed a predictive model to assess loan risk and automate decision-making using Gen AI, reducing approval time by 30% and improving overall loan portfolio performance.
- Implemented a supply chain analytics solution utilizing LLM for optimizing inventory management in a retail supply chain. Utilized machine learning algorithms to forecast demand, taking into account seasonality and market trends. The system dynamically adjusted reorder points, reducing excess inventory by 15% and minimizing stockouts. The predictive analytics-driven approach improved overall supply chain efficiency and customer satisfaction.
- Implemented demand forecasting algorithms for a retail supply chain, leveraging historical data and external factors. Improved inventory management, reducing stockouts by 15% and excess inventory by 10%.
- Conducted customer communication analysis for an e-commerce platform. Leveraged natural language processing (NLP) to analyze customer emails and support tickets. Identified common issues and sentiment trends, leading to targeted improvements in product information and customer support processes.
- Implemented a chatbot for a banking institution. Enabled customers to perform routine banking tasks, check account balances, and receive personalized financial advice. Integrated with backend systems for secure transactions. The chatbot improved customer engagement, providing quick and convenient support for common queries.
- Implemented customer communication analysis for an online retail platform. Integrated with customer support systems to provide instant assistance with order tracking, returns, and product inquiries. Implemented natural language understanding (NLU) to enhance user interactions, resulting in a 20% reduction in customer service response time.

Operations Delivery Manager - TATA Consultancy Services (TCS) 03/2013 – 12/2018

- 3+ years of experience of managing team of 200+ associates across 3 locations, ensuring management and employees' full understanding of business needs, auditing compliance, tracking progress towards goals
- Business Development, Knowledge management, process management, planning and managing offshore performance, client management, process simplification and automation
- Expertise in Working on Billings, External and Internal Audits, regular client reviews and client Surveys.
- Rich Expertise in Managing team, Process Training, interacting with clients from various cultures, consistently achieving SLA targets and maintaining higher customer satisfaction score.
- Promoting an environment where product knowledge is appreciated and equal opportunity is given to learn and grow, which also helps in creating backup for all Trainer, Quality Checker, SME and Leadership roles.
- Hands on experience with regards to Risk Management, deploying controls for mitigation, Control and Self -Assessment

Senior Associate Automatic Data Processing (ADP) (07/2010 – 07/2012)

- Worked in the Pilot Batch and was part of the team who set-up the process in Pune.
- Trained the new joiners associates in Implementation.
- Was the first associate to get trained in 4 different work types.

Senior Associate WNS Global Services (WNS) (10/2007 – 06/2010)

- Was the fastest to complete L3 accreditation for ledger management process.
- Was the winner in the process contest.

Education

BSc in Maths with Physics and Chemistry

Jabalpur University, Madhya Pradesh

2002-2005