SYED MOIZ ALI

ML Engineer & NLP Specialist | Masters @ IITK

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SUMMARY

Machine Learning Engineer with over six years of experience in applying advanced AI and machine learning models to solve complex business problems. I envision for scalable solutions by optimizing processes and enhancing decision-making capabilities through fine-tuning and deploying AI models. Proficient in neural network design, natural language processing, and deploying LLMs using state-of-the-art frameworks like TensorFlow and PyTorch. Experience in leading cross-functional teams and optimizing AI infrastructure.

EXPERIENCE

Machine Learning Engineer

Studypool Inc.

08/2019-Current

- **Recommender Systems:** Successfully implemented a collaborative filtering-based recommender system, increasing customer engagement by 20%.
- **Real-time Emotion Analysis:** Developed a real-time emotion detection system using CNN-LSTM networks, achieving 92% accuracy on recognized benchmarks.
- **AI System Design & Deployment:** Led the design, development, and deployment of end-to-end machine learning models to solve various business challenges, including customer segmentation, predictive analytics, and personalized recommendations.
- **Advanced Model Development:** Created and fine-tuned models using TensorFlow, PyTorch, and Keras, focusing on NLP and computer vision applications.
- **Cross-functional Collaboration:** Partnered with product managers, data engineers, and other stakeholders to align technical solutions with business goals.

Data Consultant

Studypool Inc.

06/2017-07/2019

- **Data Strategy & Automation:** Collaborated on developing data strategies and automating workflows to enhance data quality and analytics efficiency.
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- **AI-Driven Decision Support:** Created tools to support data-driven decision-making across various business functions.

PROFESSIONAL PROJECTS

- **Scalable NLP Data Processing Pipeline**: Developed a scalable text data processing pipeline using advanced NLP techniques for data analysis and categorization, containerized using Docker for seamless deployment.
- **Anomaly Detection in Time-Series Data**: Built an anomaly detection system using autoencoders and LSTM networks and iforest to monitor and identify unusual patterns in high-frequency time-series data, significantly improving predictive maintenance capabilities.
- **Advanced Image Segmentation for Medical Imaging**: Developed a deep learning model using U-Net architecture to perform high-precision segmentation of medical images, aiding in the early diagnosis of diseases with over 95% accuracy. Used cellpose to validate the segmentation.
- **Domain-Specific Sentiment Analysis:** Enhanced BERT models for sentiment analysis in specific domains, improving classification accuracy.
- **Multi-modal AI System for Autonomous Vehicles**: Engineered a multi-modal AI system combining computer vision and sensor data to enhance object detection and decision-making in autonomous vehicles, contributing to improved safety and efficiency.

CORE COMPETENCIES

- AI & Machine Learning: Deep Learning, Neural Networks, LLMs, Transformer Models, Reinforcement Learning, Computer Vision, NLP.
- Technical Proficiency: Python, TensorFlow, PyTorch, Keras, Scikit-learn, Hugging Face, Spark, Databricks, Kafka, Azure ML, Tableau, OpenNLP, OpenCV, Docket, Git.
- AI Infrastructure: Model Deployment, Kubernetes, TensorFlow Serving, MLflow, AWS, Azure Cloud Services.
- Data Science: Big Data Analytics, Data Preprocessing, Feature Engineering, Time Series Analysis.
- Leadership: Team Collaboration, Cross-functional Partnership, Mentorship, Strategic Planning.
- Soft Skills: Analytical Thinking, Communication, Adaptability, Project Management.

EDUCATION

MTech in Production & Operations Management (8.0)

Indian Institute of Technology, Kanpur

2009-2011 Kanpur, India

BE in Electronics & Telecommunication Engineering (8.5)

CSVTU, India

2005-2009 Bhilai, India

CERTIFICATIONS

- Algorithms (Stanford Online) Specialization (06/2021)
- IBM AI Foundations for Business Specialization (04/2021)
- IBM Introduction to Data Science Specialization (04/2021)
- IBM Key Technologies for Business Specialization (04/2021)
- Deep Learning Specialization - DeepLearning.ai (04/2021)
- TensorFlow Developer Specialization - DeepLearning.AI (05/2021)
- Generative Adversarial Networks (GANs) Specialization - Deeplearning.ai (05/2021)
- Machine Learning Engineering for Production (MLOps) - Deeplearning.ai (11/2022)

RESEARCH EXPERIENCE

Research Assistant

Sultan Qaboos University

2014-2015 Muscat, Oman

- Undertook a project titled: “Mediator-based order acceptance decision system under the make-to-order company.”
- Worked under the guidance of Dr. Sujan Piya, focusing on improving order acceptance mechanisms.

Market Analysis Internship

Central UP Gas Limited

2010 Kanpur, India

- Led an initiative to examine the market potential for natural gas in the Rania & Jainpur Industrial Areas.
- Formulated strategies to establish Piped Natural Gas service stations, enhancing the distribution network.

RESEARCH PUBLICATIONS

- Sharma, R. R. K., & Ali, S. M. (2017). Reducing a Lot Sizing Problem with Set-up, Production, Shortage, and Inventory Costs to Lot Sizing Problem with Set-up, Production, and Inventory Costs. American Journal of Operations Research, 7, 282-284. Link
- Ali, S. M., Sharma, R.R.K., & Gupta, O.K. (2015). Lagrangian Relaxation Procedure for the Capacitated Dynamic Lot Sizing Problem. AIMS International Conference on Management. Link
- Syed, M. A., & Sharif. (2012). Aggregate planning for semi-finished goods in a make-to-stock environment. International journal of Advances in Management, Technology & Engineering Sciences, 1(8(I)), 104-107.
- Sharif, & Syed, M.A. (2012). Procurement Policies & Inventory Management System in Manufacturing and Service Settings: An Optimization Framework. International Journal of Business, Management & Social Sciences, 1(9), 27-32.