**Rakesh K**

**MLOps & SRE Consultant  
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Summary**

* Experienced MLOps & SRE Consultant with expertise in AWS and Azure. Skilled in implementing scalable infrastructure and optimizing machine learning workflows to drive business results. Strong problem-solving abilities and a track record of delivering exceptional results.
* Dynamic and results-driven professional with proven experience in MLOps, Site Reliability Engineering (SRE), and Data Engineering.
* Optimization of Enterprise models and ML models.
* Hands-on experience in implementing machine learning models, ensuring site reliability, and managing large-scale data systems. Seeking to leverage these skills to drive efficiency and performance in a challenging role.
* Passionate about learning and implementing emerging technologies to solve complex business problems.

**Skills**

* Azure Machine Learning
* Azure Databricks
* Azure CICD
* AWS CloudFormation
* Terraform
* Azure Synapse Analytics
* TensorFlow Image Classification
* Deep Learning ML Models

**Education**

Texas A&M-Texas   
master’s in computer technology 2012

**Employment** **History**

**MLOps & SRE consultant**  
**Fresenius Medical Care -- Jul 2018-Present**

* **Designed the architecture of the ML system:** Created an efficient and scalable architecture for the ML system, including the infrastructure, data pipelines, training pipelines, deployment pipelines, release pipelines, and monitoring pipelines.
* **Collaborated with data scientists to understand the requirements of the ML models**: Worked closely with data scientists to understand the requirements of the ML models, including the data sources, data formats, and data quality. Developed and implemented innovative solutions to improve the ML models.
* **Developed and maintained the infrastructure for the ML system**: Implemented and developed the infrastructure for the ML system, including the hardware, software, and network components. Ensured cost savings and optimized performance.
* **Implemented and maintained the CI/CD pipeline for the ML models:** Developed and maintained the CI/CD pipeline for the ML models, including the automated testing, integration, and deployment processes. Ensured faster delivery and better quality.
* **Developed and maintained the training pipelines for the ML models**: Implemented and developed the training pipelines for the ML models, including the model training, hyperparameter tuning, and model evaluation processes. Ensured better model performance and accuracy.
* **Developed and maintained the deployment pipelines for the ML models**: Implemented and developed the deployment pipelines for the ML models, including the model deployment, versioning, and rollback processes. Ensured faster and more efficient deployment.
* **Developed and maintained the release pipelines for the ML models**: Implemented and developed the release pipelines for the ML models, including the release management, change management, and configuration management processes. Ensured better version control and management.
* **Developed and maintained the monitoring pipelines for the ML models**: Implemented and developed the monitoring pipelines for the ML models, including the model performance monitoring, data drift monitoring, and model drift monitoring processes. Ensured better model performance and accuracy.
* **Developed and maintained the drift monitoring for the ML models:** Implemented and developed the data drift monitoring for the ML models, including the data quality monitoring, data distribution monitoring, and data schema monitoring processes. Ensured better data quality and accuracy.
* **Developed and maintained the end-to-end real-time enterprise monitoring using Grafana**: Implemented and developed the end-to-end real-time. Enterprise monitoring using Grafana, including the dashboard creation, alerting, and reporting processes. Ensured better monitoring and reporting.
* **Developed and maintained the Azure ML Registry for the ML models**: Implemented and developed the Azure ML Registry for the ML models, including the model versioning, model metadata management, and model governance processes. Ensured better model governance and management.
* **Develop ed and maintained the MLFlow for the ML models:** Implemented and developed the MLFlow for the ML models, including the experiment. Tracking, model packaging, and model deployment processes. Ensured better model tracking and management.
* **Developed and maintained the Azure Kubernetes Service for the ML models**: Implemented and developed the Azure Kubernetes Service for the ML models, including the container orchestration, scaling, and load balancing processes. Ensured better container management and orchestration.
* **Developed and maintained the Dockerization for the ML models**: Implemented and developed the Dockerization for the ML models, including containerization, image building, and image management processes. Ensured better container management and deployment.
* **Developed and maintained the Virtualization for the ML models**: Implemented and developed the Virtualization for the ML models, including the virtual machine creation, configuration, and management processes. Ensured better virtual machine management and deployment.
* **Exposed the ML Engineered models as Rest API end point**: Implemented and developed the ML Engineered models as Rest API end point, including the API design, API development, and API testing processes. Ensured better API management and deployment.
* **Evaluated the ML model with Inference Vs real-time metrics**: Evaluated the ML model with Inference Vs real-time metrics, including the model accuracy, model performance, and model fairness evaluation processes. Ensured better model performance and accuracy.
* **Develop and maintain the Image classification ML Model using TensorFlow, Tensor Board, Tensor Lite, and Deep Learning Algorithms**: Developed and maintained the Image classification ML Model using TensorFlow, Tensor Board, Tensor Lite, and Deep Learning Algorithms, including the model training, model evaluation, and model deployment processes.
* **Implement PoC using Azure OpenAI, Llama Index, Chroma DB, LangChain,RAG, and CDQA**: Implemented PoC using Azure OpenAI, Llama Index,ChromaDB, LangChain, RAG, and CDQA, including the PoC design, PoC development, and PoC testing processes.

**SRE Consultant  
Change Healthcare -- 2015-2018**

* Developed software solutions to assist DevOps, ITOps, and support teams, enhancing operational efficiency.
* Resolved support escalation issues promptly, minimizing downtime and improving user experience.
* Optimized on-call rotations and processes, reducing response times, and improving service quality.
* Documented "tribal" knowledge, preserving critical information, and facilitating knowledge transfer.
* Conducted thorough post-incident reviews to identify root causes and prevent recurrence.
* Successfully implemented SRE principles for a critical business application, improving reliability and performance.
* Secured leadership buy-in for the implementation of SRE, aligning IT strategy with business objectives.
* Adopted an iterative approach, starting small and gradually expanding the scope of SRE implementation.
* Set realistic and measurable goals, ensuring alignment with business needs and capabilities.
* Automated critical actions to enable real-time response without human intervention, enhancing system resilience.
* Continuously optimized on-call rotations and processes, improving team productivity and system uptime.
* Led the detailed, real-time implementation of SRE principles in a production environment for a healthcare client, demonstrating adaptability and industry-specific expertise.

**Data Engineer   
McKesson -- 2012-2015**

* Designed and implemented data models, database schemas, data structures, and processing algorithms for complex and large-scale datasets.
* Utilized normalization and denormalization techniques for optimal performance in relational databases.
* Developed and maintained robust ETL pipelines using tools like Apache Beam, Airflow, and Talend.
* Managed data workflows and ensured timely data delivery for critical business operations.
* Worked with big data technologies like Hadoop, Spark, and Hive to process and analyze large datasets.
* Optimized Spark jobs for improved performance and resource utilization.
* Leveraged cloud platforms (AWS, GCP, Azure) for data storage (S3, Google
* Cloud Storage, Azure Blob Storage) and data processing (EMR, DataProc,HDInsight).
* Managed and optimized cloud resources for cost-effective operations.
* Implemented data governance policies and practices to ensure data accuracy, security, and legal compliance.
* Used data quality tools to clean, standardize, and enrich data.
* Proficient in programming languages like Python and Java, and scripting languages like SQL and Bash for data manipulation and analysis.
* Developed custom functions and libraries to support data operations.
* Optimized database queries for improved performance and reduced resource usage.
* Tuned big data jobs and cloud resources for cost-effective operations.
* Collaborated with data scientists, analysts, and other stakeholders to understand data needs and deliver appropriate solutions.
* Communicated complex data concepts and insights to non-technical stakeholders.