Naganathan Paramasivam

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SKILLS

- MLflow (Model Tracking & Registry), AWS SageMaker (Model Training & Deployment), AWS, FastAPI, Kubernetes, GitHub Actions, Prometheus & Grafana, Docker (Model Packaging),
Terraform (Infrastructure as Code for ML Systems), Python

EXPERIENCE

MLOps Engineer (Transitioned from DevOps) | AWS Certified　　　　　　Sep 2021 - Present
Arthur grand technologies

- Engineered and deployed end-to-end ML pipelines, processing over 50 million daily predictions with 99.9% uptime using MLflow, Kubernetes, and AWS SageMaker.
- Developed a real-time model serving infrastructure, achieving scalable inference systems that handle over 15,000 transactions per second with sub-100ms latency using FastAPI and Redis.
- Established MLOps best practices, creating frameworks with automated versioning and A/B testing, enhancing deployment efficiency by 30% through GitHub Actions and Terraform.
- Implemented monitoring solutions with Prometheus and Grafana, enabling automated retraining when model accuracy falls below 85%, ensuring consistent model performance.
- Streamlined cloud infrastructure, reducing operational costs by 40% while maintaining 99.97% availability through spot instances and auto-scaling on AWS.
- Designed feature engineering and data pipelines, processing over 100TB of data monthly, which improved model accuracy by 15% through real-time computation.

PROJECTS

Real-Time Fraud Detection System

- Developed streaming ML pipeline using Kafka/Redis, processing over 15,000 transactions per second with ensemble models including XGBoost, LightGBM, and Neural Networks.
- Achieved 94.8% precision and 91.2% recall, preventing $2.3M in fraudulent transactions over six months while maintaining latency under 85ms.
- Engineered 63 real-time features, incorporating behavioral patterns, velocity metrics, and graph-based relationships, stored in a Redis feature store.
- Deployed applications on AWS ECS utilizing a blue-green deployment strategy, circuit breakers, and automated rollback mechanisms to ensure 99.97% availability.
- Implemented comprehensive monitoring with custom alerts for model drift, reducing false positives by 67% and saving $1.2M in operational costs.

Kubia AI - Intelligent AIOps Automation Platform

- Architected an AI-driven DevOps automation platform utilizing NLP, reducing operational overhead by 75% and saving over 30 engineering hours weekly.
- Developed a centralized automation hub integrating Slack, Freshservice, and monitoring tools, enabling engineers to manage infrastructure via chat commands, enhancing efficiency.
- Engineered a predictive failure detection system using LSTM and Prophet models, achieving 89% accuracy in predicting system failures, preventing 20+ critical outages monthly.
- Implemented a self-healing framework with automated remediation playbooks for 50+ scenarios, resolving 65% of incidents autonomously and reducing MTTR from 45 to 8 minutes.
- Deployed an event-driven microservices architecture on Kubernetes with Kafka, processing over 5000 daily automation requests with 99.9% reliability and sub-second response times.

ModelWatch - Production ML Monitoring System

- Built a comprehensive ML observability platform to monitor 50+ production models for drift, performance degradation, and data quality issues in real-time.

- Implemented custom Prometheus exporters and Grafana dashboards to track model-specific metrics (accuracy, latency, drift scores) with automated alerting.
- Developed a model performance comparison framework to enable A/B testing and shadow deployments with statistical significance testing for safe rollouts.
- Created automated retraining pipelines triggered by drift detection, reducing model staleness by 82% and maintaining >90% accuracy across all models.
- Integrated with existing DevOps tools (PagerDuty, Slack) for unified incident management, reducing MTTR for ML issues from 4 hours to 35 minutes.

ACHIEVEMENTS

Completed: AWS Certified Solutions Architect - Associate (SAA-C03)
Planned: AWS Certified Machine Learning - Specialty

EDUCATION

Scaler 2025
Specialized in Data Science & Machine Learning

Jamal Mohammed 2021
MCA/BCA
Completed a BCA degree, specializing in computer science and IT