

AWS Real-Time Fraud Detection Architecture

This diagram describes a cloud-based architecture for detecting fraud and anomalies in real-time using AWS services. 1. Data Sources: Applications, APIs, or IoT sensors send data continuously. 2. Stream Ingestion: AWS Kinesis or Kafka collects streaming events. 3. Data Processing: AWS Lambda or Apache Flink performs feature extraction. 4. Machine Learning Inference: Amazon SageMaker hosts trained fraud detection models. 5. Storage: Clean data and inference results are stored in DynamoDB or S3. 6. Visualization: QuickSight or Grafana dashboards display real-time alerts. The system ensures low latency and scalability for continuous fraud monitoring.