ROBERT McCRAY

Houston, TX | mccrayrobert26@gmail.com | (713) 399-9544 | Portfolio:
https://sites.google.com/view/rmactech/home | Github: github.com/KidNextDoor52 | LinkedIn:
linkedin.com/in/robert-mccray-467613195

SUMMARY

Lead Software Engineer / Cloud Data Engineer with 4+ years of experience building secure, scalable backend systems and cloud-native data platforms across AWS and Azure. Specialized in ETL/ELT pipelines, API-driven services, and analytics-ready architectures using Python (FastAPI), Docker, Terraform, and Snowflake. Proven record designing HIPAA-compliant, multi-tenant systems with FHIR-compatible APIs, governed PHI/PII handling, and ML-ready datasets supporting healthcare and compliance-driven environments.

EXPERIENCE

Lead Software Engineer
Baltimore Area Sports Health | Baltimore, MD
March 2025 – Present

- Built and scaled a HIPAA-compliant, multi-tenant cloud backend on AWS (Lambda, API Gateway, Cognito) using FastAPI and Docker to ingest, process, and securely share structured and unstructured healthcare data (PHI/PII).
- Designed RESTful, FHIR-compliant APIs (Patient, Observation, DocumentReference) enabling interoperable data exchange with EHRs, clinical systems, and external partners.
- Implemented cloud-native data ingestion pipelines for structured and unstructured sources (CSV, PDF/OCR, sensor events), applying NLP preprocessing and ML-ready transformations for downstream analytics.
- Designed a hybrid data architecture using MongoDB for event-level storage, PostgreSQL for structured FHIR workflows, and Snowflake as the analytical warehouse for high-volume reporting and ML pipelines.
- Automated data intake workflows, reducing manual processing by 70% by converting OCR outputs into structured, FHIR-compatible resources with real-time data quality alerts.
- Applied compliance-by-design principles including centralized logging, IAM-based access control, request validation, and data retention policies aligned with HIPAA and CMS requirements.
- Containerized backend services using Docker to standardize development, testing, and deployment workflows, including automated HL7/FHIR validation.

IT Systems Engineer
Keystone Advisors | Houston, TX
March 2024 – June 2024

- Built and orchestrated Azure Data Factory pipelines to securely ingest and transform sensitive healthcare data for CMS compliance reporting.
- Integrated Azure Health Data Services (AHDS) to normalize HL7/FHIR datasets at scale for interoperability with government and payer systems.
- Developed Power BI dashboards with row-level security (RLS) and FHIR-specific filters, enabling real-time reporting for C-suite and compliance teams.
- Tuned performance of FHIR bundles in Azure Synapse pipelines, reducing ETL execution times by 30%.
- Automated CMS API integrations, reducing data failure rates by 80% through retry/backoff logic and schema validation.

Junior IT Systems Engineer
Bel BeautEssentials | Houston, TX
October 2022 – March 2024

- Managed AWS IAM roles and access controls, reducing over-permissioned accounts by 50%
- Migrated documentation to S3 with CRR and CloudFront, improving load speed by 40%

- Deployed cost-saving alerts via Cost Explorer and Reserved Instances, reducing AWS spend by 20%

Junior Data Engineer
Carbon Coder Community | Atlanta, GA
March 2020 – January 2022

- Built multi-cloud ETL pipelines using ADF and AWS Glue to ingest and transform large-scale sports datasets
- Integrated NLP preprocessing using Azure Functions and S3-triggered AWS Lambdas for real-time analytics
- Deployed Kubernetes-based services with autoscaling and monitoring, reducing latency by 35%

EDUCATION

Bachelor of Liberal Arts and Science
Indiana University – May 2018

CERTIFICATIONS

- **DevOps Professional Certificate - PagerDuty (Incident response, observability, reliability)**
- **Docker Foundations Professional Certificate - Docker**
- **Ubuntu Linux Professional Certificate - Canonical**
- **Career Essentials in System Administration - Microsoft**
- **Cloud Strategy Professional Certificate**
- **Hands-on Data Science & AI for Healthcare (Healthcare analytics, ML pipelines, PHI gov)**

SKILLS

- **Data Engineering & Orchestration:** ETL/ELT pipelines, batch and event-driven ingestion, data modeling, schema validation, data quality checks, retry/backoff logic, Azure Data Factory, scheduled and trigger-based workflows
- **Cloud & Data Platforms:** AWS (Lambda, API Gateway, Cognito, S3), Azure (ADF, Synapse, AHDS), Snowflake, GCP
- **Databases & Storage:** MongoDB, PostgreSQL, SQL Server, DynamoDB
- **Programming Languages:** Python, SQL, Java, Node.js
- **Frameworks & Libraries:** FastAPI, Pandas, NumPy, scispaCy
- **DevOps & Infrastructure:** Docker, Kubernetes, Terraform, GitLab CI/CD, Jenkins
- **Security & Compliance:** HIPAA, HL7 FHIR, SMART on FHIR, PHI/PII handling, OAuth2, RBAC, audit logging, CMS Interoperability
- **Analytics & Visualization:** Power BI, QuickSight
- **Workflow & Collaboration:** Jira, Confluence, SharePoint, Azure Health Data Services (AHDS)
- **Database Tooling:** SQLAlchemy, mongo-express