

# RAGHU VITARIAPPA

AI & Data Manager | Cloud & AI Data Platforms | Healthcare & Public Sector Data Modernization

Ellicott City, MD · [REDACTED] · [REDACTED]

## Professional Summary

Data and AI manager with 20+ years building cloud data platforms and AI capabilities for large, regulated organizations, most recently in federal healthcare and tax technology. Current work focuses on AI enablement for an IRS developer platform on GCP Vertex AI, and on Databricks pipelines processing large-scale healthcare claims data for clinical outcomes research. Earlier roles include leading the migration of two legacy enterprise systems to AWS/PostgreSQL with a zero-defect production cutover and building an AI-driven NLP tool that cut manual document review time by 30–40%.

**Core stack:** Databricks · PySpark · Snowflake · BigQuery · Vertex AI · SQL · Python · AWS · GCP · RAG · CI/CD · RMF/ATO

## Core Skills

|                             |                                                                                                                                                                              |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AI & Data Strategy          | AI/Data Strategy, Data Modernization Roadmaps, Use-Case Intake, Portfolio Prioritization, Governance Boards, Value Realization, Executive Briefings, Stakeholder Alignment   |
| AI / GenAI Capabilities     | RAG, Agentic AI Patterns, Embeddings, Vector Search, Prompt/Configuration Versioning, Grounded Generation, AI-Assisted Summarization, Classification, Information Extraction |
| AI/ML Platforms & Tools     | GCP Vertex AI, Gemini, AWS SageMaker, AWS Comprehend, TensorFlow, Keras, LangChain                                                                                           |
| MLOps / LLMOps              | Model Lifecycle Management, Feature Pipelines, Model Evaluation, Model Registry, Drift Monitoring                                                                            |
| Data Architecture           | Data Lakehouse, Medallion Architecture, Data Products, Semantic Layers, Metadata, Data Lineage, Data Quality, Data Modeling, Data Governance, Data Reconciliation            |
| Data Platforms              | Databricks, Snowflake, BigQuery, Delta Lake, AWS Redshift, PostgreSQL, Oracle, DB2, SQL Server                                                                               |
| Cloud & DevSecOps           | GCP, AWS, Azure, Terraform, CloudFormation, CI/CD, GitHub, Jenkins, Kubernetes, Docker, IAM, SIEM, Zero Trust                                                                |
| Governance & Security       | Responsible AI, Model Validation, Explainability, Bias Mitigation, Privacy Controls, RMF/ATO/cATO, HIPAA-Aware Data Patterns                                                 |
| Healthcare & Regulated Data | Medicare/Medicaid Claims & Analytics, Value-Based Care Models, Clinical Outcomes Analytics, HL7, FHIR                                                                        |
| Engineering & BI            | SQL, PySpark, Python, Scala, Informatica, Tableau, Power BI, MicroStrategy, Business Objects, Cognos                                                                         |

## Professional Experience

**Healthper USA, Inc.** | Technical **Lead / AI & Data Manager** 01/2026 – Present  
*Internal Revenue Service (IRS): Developer Platform / GCP Vertex AI Enablement*

- Lead AI workload onboarding on GCP Vertex AI for an IRS developer platform, defining secure cloud patterns and delivery documentation.
- Document access controls, telemetry requirements, and release plans supporting security authorization (ATO) for AI workloads.

**Deloitte Consulting LLP (contracted through JOS Group) |**

09/2024 – 01/2026

**Technical SME /– AI & Data Architecture**

*HHS CMS: Medicaid Data Aggregation for CMMI Outcomes Research*

- Architected Databricks Medallion pipelines (bronze, silver, gold) for large-scale Medicaid claims and administrative data supporting CMS/CMMI analytical models, including transfusion-related and treatment-evaluation outcomes research.
- Worked alongside data scientists and CMS SMEs to define data requirements and validate quality on feature-ready datasets used for cohort and longitudinal analysis.
- Built de-identification, reconciliation, and lineage controls into the data preparation workflow, giving CMS auditors a clear trail from raw claims to analytic output.
- Standardized Medicaid datasets used across cohort analysis, treatment outcome review, and milestone tracking for model evaluation readiness.
- Developed validation and reconciliation routines that strengthened trust in Medicaid claims data feeding downstream analytics and CMS reporting.

**TISTA Science & Technology Corporation | Data Architect**

10/2020 – 08/2024

*HHS CMS: Next Generation Case Management Modernization*

- Cut review rework by 1–2 cycles by authoring security authorization (ATO) documentation, including architecture diagrams, data flow narratives, access control specifications, and monitoring evidence.
- Led the migration of two legacy IBM DB2/FileNet systems to AWS/PostgreSQL, building reconciliation controls that supported a zero-defect production cutover of the underlying data.
- Set CMS data architecture standards for ingestion, transformation, metadata, lineage, and access controls, later adopted into the program's data dictionary and data flow documentation.
- Designed data product patterns spanning PostgreSQL, Snowflake, Oracle, and DB2 to support operational reporting, program integrity, and fraud/waste/abuse analytics.
- Owned platform resilience across the program's data environment, covering backup/restore procedures, load monitoring, incident response, and audit logging.
- Served as technical liaison between CMS stakeholders, application teams, and security teams, keeping the modernization roadmap and security authorization requirements aligned.

**Marlabs Inc. | Technical Architect / Analytics Manager**

11/2007 – 09/2020

*Consultant to Tantis Technologies | HHS CMS Quality & Safety Modernization Program | 08/2016 – 09/2020*

- Architected an AWS-native NLP prototype that automated classification and triage of 10,000+ public comments, cutting manual review effort by 30–40% and giving CMS a concrete feasibility case for AI-driven modernization.
- Built AWS serverless data pipelines using Glue, EMR, Lambda, API Gateway, and CloudFormation to move data into S3 and RDS PostgreSQL for reporting and analytics.
- Advised CMS leadership as data subject-matter expert on governance, enterprise data standards, and cloud modernization tooling.
- Led Agile delivery for a multi-year CMS modernization workstream, covering roadmap planning, backlog prioritization, and sprint execution.
- Produced logical data models, data dictionaries, and source-to-target mappings supporting the PostgreSQL/S3 migration.
- Represented engineering in CMS technical governance forums, shaping architecture decisions on cloud modernization and security.

***Selected Earlier Data Architect/Data Analytics Experience***

**Optum Health | Data Analytics Lead**

03/2016 – 07/2016

*HHS CMS: Medicaid T-MSIS (Consulting through Marlabs)*

- Managed Medicaid data across multi-state sources for CMS Medicaid reporting, handling mapping, standardization, ingestion, and quality review.
- Built Medicaid BI semantic layers and reporting structures on AWS Redshift and Business Objects.
- Developed Spark/Python jobs to ingest and transform multi-state Medicaid data in Hive.

**Northrup Grumman | Data Analytics Lead**

04/2015 – 02/2016

*HHS CMS Next Generation ACO (Consulting through Marlabs)*

- Guided ETL and BI reporting for an ACO reporting platform, tracking delivery progress and aligning outputs with CMS needs.
- Partnered with CMS data architects on ACO reporting data marts and aggregate views for multiple ACO program models.

**General Dynamics IT | Data Analytics Architect**

12/2013 – 03/2015

*HHS CMS: Medicaid Statistical Reporting (Consulting through Marlabs)*

- Designed MicroStrategy semantic layers and dashboards for Medicaid statistical reporting.
- Built Informatica mappings and workflows reconciling legacy claims data for the Medicaid warehouse.

**Signature Consulting Group / Lockheed Martin | Analytics Lead**

10/2011 – 11/2013

*HHS CMS ACO Programs (Consulting through Marlabs)*

- Designed BI and analytics capability for CMS quality and ACO reporting, covering database design, dimensional modeling, and ETL, through production.
- Resolved data quality and partner feed issues affecting CMS ACO reporting.

**Marricom, LLC/ General Dynamics IT/ | Data Analytics Architect / BI Consultant**

2007 – 2011

- Led BI/ETL modernization across multiple CMS reporting programs using MicroStrategy, Business Objects, Cognos, and Informatica.
- Owned reporting requirements, test plans, and production deployment for CMS BI initiatives.

**Education & Certifications**

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**Education:** M.S., Mechanical Engineering, Wayne State University | B.S., Industrial & Production Engineering, The National Institute of Engineering, Mysore

**Certifications:** PMP; AWS Big Data Specialty; AWS DevOps Professional; AWS DevOps Associate; AWS Solutions Architect Associate; Databricks Certified Data Engineer Associate; Cloudera Spark & Hadoop Developer CCA175; SAFe 4 Government Practitioner; SAFe Agile Practitioner; MicroStrategy Certified Engineer; DevOps Foundation