LUCAS COFFEY

Richmond, KY, 40475

859-360-9979 | LucasCoffey@gmail.com

www.CoffeyBlog.com | www.LinkedIn.com/in/LucasCoffey/ | https://github.com/CoffeyBlog

DATA ENGINEER | MACHINE LEARNING | SOFTWARE ENGINEER

Military veteran, with 4 years of specialized experience in building data intensive machine learning applications at Accenture Federal Services supporting the Centers for Medicare & Medicaid Services, Healthcare.gov and USMS. Served as a Hybrid Data Engineer Tech Lead, while owning the Risk-Adjustment Machine Learning use case, driving development and implementation. Offering extensive knowledge in engineering tasks within the fields of data, machine learning engineering and automation such as developing data pipelines, automating ETL using serverless services and even building internal team tools. Possesses a comprehensive background in AWS, Python, PySpark, Kafka, SQL, Java and Javascript. Ability to solve diverse problems across industries—whether it's building scalable data pipelines, deploying AI-driven solutions, or optimizing machine learning models for real-world impact. At the intersection of Software Engineering and Data Science, ensuring that innovative models don't just work in theory but drive real business value. Passionate about leveraging cutting-edge technology to help organizations make smarter, data-driven decisions. Career supported by a Bachelor's Degree in Information Technology, an Associate's Degree in Business and multiple technology and aviation certifications.

- Data Engineering
- ETL/ELT Pipelines
- Data Pipelines
- Data Lakes
- Data Warehousing

- Apache Spark
- AWS Glue
- AWS Athena
- AWS S3
- AWS Redshift

- Amazon EMR
- Amazon Step Functions
- Python
- Java
- SQL

- Machine Learning
- Jupyter Notebooks
- AWS Sagemaker
- Tensorflow
- AWS Lambda

CAREER HIGHLIGHTS

- **Expertise |** Profound expertise in building Cloud Native Data Applications, specifically, in the domain of architecting, designing, or building cloud-native web, data and machine learning applications on AWS. Served as Tech Lead & primary Data Engineer at Accenture Federal Services while working on the CMS account, while also owning the Risk Adjustment use-case as a Machine Learning engineer.

- **Technologies |** Successful history of communicating complex technical matters with business leaders, executives, product teams and engineers. Experienced in a variety of enterprise level development technologies such as AWS services, Serverless applications, Python, Spark, Kafka, Tensorflow, Scikit-Learn, SQL Databases NoSQL databases, AWS Data Lakes, Javascript, Vue and Nuxt.

- **Communication |** Strong communication skills to understand the businesses needs and provide exceptional results. Track record of successfully dealing with difficult personalities within military, government, and business to communicate technical strategies. Able to communicate with clarity regarding technical topics to business leaders.

PROFESSIONAL EXPERIENCE

Accenture Federal Services | *Remote*   **2024-Present**
MLOps Engineer - Infrastructure
MLOps and Infrastructure Engineer at Accenture Federal Services supporting CMS and Healthcare.gov. Maintains and troubleshoots AWS environments, provisions new infrastructure and performs patching duties on ML and Data applications. Develop and maintain internal team tools.

- Perform patching duties on servers running Kafka.
- Develop an internal Blueprint tracking app for changes to Terraform.
- Keep infra compliant via naming and tagging.
- Provision new infrastructure such as servers, databases and other AWS infrastructure .
- Create and maintain step functions that run scripts which start and stop EMR clusters.

Accenture Federal Services | *Remote*   **2023-2024**
Data Engineer - AI & Data Science Team
Served as tech lead and Data Engineer at Accenture Federal Services supporting CMS and Healthcare.gov, developing and maintaining Spark data pipelines on AWS Glue. Contributed to AI team projects, automating data processes and leading the cloud migration of AI/Data services to a dedicated team account. Utilized Jupyter Notebooks on Amazon EMR for data cleaning and analysis. Built data workflows leveraging AWS Glue, Lambda, and SageMaker. While also owning the Risk Adjustment use case as a Machine Learning Engineer

- Data Engineer at Accenture Federal Services, supporting CMS and Healthcare.gov.
- Developed and maintained Spark-based data pipelines on AWS Glue.
- Contributed to AI team projects, developing and automating data processes.
- Led cloud migration of AI & Data services to a dedicated team account.
- Led integration of CI/CD workflow into AI & Data Science daily activities.
- Cleaned, analyzed, and processed data using Jupyter Notebooks on Amazon EMR, and built workflows with AWS Glue, Lambda, and SageMaker.

Accenture Federal Services | *Remote*   **2022-2024**
Machine Learning Engineer - AI & Data Science Team
Served as a Machine Learning Engineer with expertise in developing and managing the Risk Adjustment use case. Owned models and dashboards used to identify high-risk behaviors within plans, agents and brokers. Use AI models to detect potential fraud and drift by analyzing outliers and anomalies which allowed for data-driven insights for enhanced decision-making.

- Led the Risk adjustment use case for CMS.
- Owned models associated with the RA use case.
- Created bi-annual reports that we gave to CMS leadership.
- Used Tensorflow and Scikit-Learn to identify behaviors..
- Used AWS Quicksight dashboards to develop reports and send to CMS Leadership.
- Automated data pipelines using AWS Glue, AWS Glue Workflows and AWS Step functions.

Accenture Federal Services | *Remote*   2021-2022
Data Engineer - Data Analytics & Reporting Team

Worked as Data Engineer on USMS and DOJ project. This project was a Cloud and Data migration from legacy Oracle data mart systems to an AWS Cloud-Native Data Lakehouse infrastructure. The process involves migrating all data to S3, crawling legacy data, transforming the file structure to parquet, and creating complex SQL queries in both Amazon Redshift and Amazon Athena to produce Tableau reports.

- Reconcile legacy data using Oracle SQL Developer to AWS data in Athena.
- Documenting the new infrastructure through Source to Target Mapping.
- Creating updated complex SQL (queries/views) in Athena.
- Use AWS Glue to crawl and transform legacy data sources.
- Use S3 to host all data, old, new and logs.
- Build ETL using AWS Glue and AWS Lambda ETL

Kentucky Air National Guard | *Louisville, Ky*   2001 - 2006
Aerospace Maintenance – Crew Chief C-130H

Tasks consisted of Maintain aircraft, support equipment (SE), and forms and records. Perform duties as production supervisor, flight chief, expediter, crew chief, support, aero repair, and maintenance functions. Advise on problems maintaining, servicing, and inspecting aircraft and aerospace SE. Use technical data to diagnose and solve maintenance problems on aircraft systems. Interpret and advise on maintenance procedures and policies to repair aircraft and SE. Supervise and assist in launching and recovering aircraft. Review maintenance data collection summaries to determine trends and production effectiveness. Perform crash recovery duties. Perform staff and supervisory management functions.

- Own aircraft and keep flight ready
- Prep Aircraft preflight and recover aircraft post flight.
- Document flight history and maintenance history.
- Maintain base wide documentation of aircrafts availability status.
- Track and manage aircrafts maintenance and status.

MILITARY SERVICE

Veteran of the Kentucky Air National Guard, C-130 Crew Chief | Served 5 Years, *Honorable Discharge*

EDUCATION

B.S. Information Technology – Web Development | Southern New Hampshire University, (Dec. 2019)
A.S. Business Administration | Southern New Hampshire University, (Feb. 2017)

AWARDS & NOTABLE ACHIEVEMENTS

Accenture P.R.I.D.E. Award | For leading AWS Migration
Accenture Notable Achievement | For developing GenAI Healthcare

CERTIFICATIONS

AWS Certified AI Practitioner (Foundational) | AWS Certified Machine Learning Engineer (Associate)
AWS Solutions Architect (Associate) | AWS Cloud Practitioner (Foundational)
Microsoft Azure AI-900 | Microsoft Azure AZ-900
ITIL V4 (Fundamentals)

SPECIALIZED TRAINING

Artificial Intelligence | Machine Learning | Data Engineering | Data Analytics
AWS Cloud Engineering | Web Development | Software Engineering
Aviation | Aerospace Maintenance

TECHNICAL SKILLS

AWS Cloud Engineering | Data Engineering | Machine Learning | Artificial Intelligence
AWS S3 | AWS Glue | AWS Athena | Amazon EMR | Amazon Step Functions | AWS Lambda | Amazon API Gateway | Amazon EC2
Amazon SQS | Amazon SNS | Apache Spark | Apache Kafka | Java | Python | Jupyter Notebooks | Tensorflow | Scikit-Learn |
Node.js | Javascript | Vue | Nuxt | DynamoDB | Redshift Spectrum | Terraform | CI/CD / GitHub

SECURITY CLEARANCE

Public Trust with Accenture Federal Services | 2021-Present
Secret Clearance with Kentucky Air National Guard | 2001-2006