VIGNESH VENKATAKUMAR

Cloud and Data Engineer specializing in AWS Infrastructure, ETL solutions, SQL and analytics workflows.

Buffalo, NY, USA | +1(716)808-1681 | vigneshv007@gmail.com | LinkedIn | Portfolio | Willing to Relocate

SKILLS AND CERTIFICATIONS

- **Cloud Services and DevOps**: EC2, S3, Lambda, RDS, IAM, Glue, ECS, CloudFormation, EBS, DMS, Docker, GitHub, GitHub Actions, Terraform, AWS Codepipeline.
- **Data Engineering and Management**: PostgreSQL, MySQL, Oracle, NoSQL, RedShift, ETL pipelines, Microservices, Step Functions, Apache Airflow, Apache Spark, Databricks, Apache Kafka, DBT, Snowflake, Trino, Apache Iceberg.
- **Programming and Tools**: Python (Boto3, PySpark, Flask, Pandas, Scikit-learn), C, Visual Studio, TrackWise 8.7, Crystal Reports, Tableau.
- **Certifications**: AWS Certified Data Engineer Associate, AWS Certified DevOps Engineer Professional, AWS Certified Solution Architect Associate, Cloud Computing Certification from Great Learning, DataExpert.io

EXPERIENCE

Community Dreams Foundation | Data Engineer Intern   Sep 2024 – Mar 2025
- Designed and implemented a serverless architecture using AWS API Gateway, AWS Lambda, and DynamoDB for fast, secure storage and retrieval of student quiz data, performance metrics, and assessment results.
- Optimized DynamoDB database design for fast query performance and automated daily snapshots of quiz data into Amazon S3 data lake using AWS Glue and utilized Athena for trend analysis.

LatentView Analytics | Senior AWS Data Engineer   Sep 2022 – Dec 2022
- Developed a Databricks-based analytics solution processing about 1TB daily vehicle telemetry data and delivered interactive dashboards to visualize traffic congestion, charging infrastructure needs, and regional driving insights.
- Built scalable ETL pipelines and APIs to analyze vehicle data across 100+ high-density customer regions, optimizing strategic decisions for service station placements and resource allocation.
- Optimized AWS infrastructure leveraging serverless architectures, AWS Glue workflows, Step Functions, and Codepipeline, enhancing urban mobility analytics while reducing data processing costs by 20%.

Deloitte | Cloud Engineer   Aug 2020 – Sep 2022
- **Led a team of 3**, building automated tagging mechanisms for AWS S3 files and integrating ServiceNow via AWS Lambda and Glue, automating incident creation upon job failures.
- Delivered **POCs** for **containerizing** a Flask application on **AWS ECS**, enabling secure **cross-account S3 access**, and piloted **OHDSI Atlas software** on the cloud for healthcare analytics, which led to full-scale adoption.
- Architected **Data pipelines** and implemented transactional **data modelling** for vendor data using **Apache Airflow** with AWS serverless technologies reducing processing time by 25%. Received a **spot award** for flawless deployment.
- **Migrated** on-premises PubMed and Embase systems ETL processes to AWS, leveraging **Glue** and **Airflow**, enhancing data availability and streamlining operations for medical research systems.
- Enhanced **database performance** and availability by migrating on-premises systems to Aurora PostgreSQL using **AWS DMS**. Reduced operational costs by 50% and migrating historical data for vendor projects.
- Launched **CI/CD pipelines** using AWS Codepipeline, **CloudFormation**, and **GitHub Actions**, ensuring repeatability in testing and dependency management. **AWS SAM** builds and triggered deployments enhanced deployment speed.
- Designed Fact and Dimension tables for a pharmaceutical data warehouse on Amazon Redshift, reducing query response times by 30%, and leveraged DBT and Apache Airflow to automate department-specific data marts, accelerating business analytics.
- Built a Databricks batch analytics pipeline following the Medallion architecture for large-scale pharmaceutical sales and inventory data, leveraging Spark for high-volume data transformation, quality management, and governance.

Cognizant | Associate   May 2016 – Jul 2020
- Deployed TrackWise infrastructure via AWS CloudFormation utilizing EC2, ELB, RDS, for robust failover strategies.
- Configured **CloudWatch Agent** on EC2 to capture TrackWise logs and created Lambda and **CloudWatch Alarms** for **real-time monitoring** and alerts, reducing response time by 20% and improving system reliability.
- Orchestrated workflows using **AWS Step Functions**, integrating manual approvals and notifications with **SNS** for efficient data distribution ensuring regulatory compliance. Improved process efficiency by reducing manual efforts.

PERSONAL PROJECTS

- **Car Rentals:** Flask web application leveraging SQL stored procedures and triggers to manage rentals on AWS using CI/CD.
- **Restaurant Analytics**: Machine learning app to predict restaurant ratings and online feasibility deployed on AWS.
- **Insurance Processing:** Streamlined claims workflow with AWS Step Functions Lambda, SNS, DynamoDB and API Gateway.
- **Cost Prediction:** Developed machine learning models for predicting medical insurance costs and generate insights.

EDUCATION

University at Buffalo, Master of Science in Data Science   **May 2024**
Anna University, Bachelor of Engineering in Electrical and Electronics   **May 2016**