Nikhilan Velumani

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SUMMARY

Data Engineer with 4+ years building cloud data platforms and automated ETL/ELT across **Azure/AWS**, proficient in **Python, SQL, Spark**, and **UNIX/Linux**. Delivered scalable data lakes, analytics pipelines, and CI/CD workflows using **Ab Initio, AWS Glue, Alteryx**, and **Azure DevOps**/**Terraform**. Strong in performance tuning, data quality, and stakeholder collaboration to ship reliable batch and streaming analytics.

AREA OF EXPERTISE

ETL Development | Data Modeling and Transformation | Dimensional Modeling | Cloud Data Architecture (AWS, Azure, S3) | Big Data Technologies (Hive, Spark) | CI/CD Automation | Data Orchestration | Data Reconciliation | Commercial Credit Data | SQL Optimization | Data Warehousing | Metadata Management | Observability and Monitoring | Agile and Scrum | Version Control (Git) | Stakeholder and Cross-Functional Collaboration | System Analysis and Optimization | Performance Tuning | Root Cause Analysis | Data Governance and Compliance | Cost Efficiency and Scalability Strategy | Data-Driven Decision Making

TECHNICAL SKILLS

Languages: Python, R, SQL, Unix/Linux
Visualization: Tableau, Microsoft Power BI, D3, Altair, Gephi, Sigma
Data: Ab Initio, Informatica, Autosys, Alteryx, Splunk, Snowflake, Hadoop, Hive, Fabric, Spark, UiPath
Tools: Visio, AWS(S3, Athena, SageMaker, Glue), Power Automate, UiPath, Jira, Docker, Azure(ADLS/Blob, DevOps)
AI Tools: Hugging Face Transformers, LangChain, Streamlit, OpenAI API, n8n, Phidata, Geoapify (Geospatial APIs)

EXPERIENCE

Technical Product Manager **May 2025 - Present**
US India Chamber of Commerce DFW *Dallas, TX*

- Engaged directly with sponsors, partner orgs, and internal stakeholders to **surface pain points** and **translate** them into **backlog items** that improved partner satisfaction and adoption.
- Automated critical workflows using **Power Automate**, **n8n**, and **Python**, reducing manual processes by **30%** and saving **4+ hrs/day**.
- **Established Azure cloud services from on-prem** (ADLS/Blob, ADF, Databricks, Event Hubs, Functions) with Key Vault, and Azure DevOps CI/CD to standardize and accelerate data delivery.

Data Engineer / Product Manager(Academic) **Jan 2025 - May 2025**
Health Care Service Corporation (C1 Innovation Lab) *Dallas, TX*

- Conducted **user-centric research** to identify healthcare behaviors, **coverage barriers**, and **information gaps** among Gen-Z student populations, **generating actionable insights** for a leading private health insurer.
- Brainstormed and authored user stories, **developed detailed personas**, and **proposed strategic solutions** to increase insurance literacy and adoption.
- Presented the strategic roadmap to C-level executives and cross-functional client teams, articulating technical feasibility and measurable business impact.

Sr Analytics Consultant **May 2024 - Jan 2025**
US India Chamber of Commerce DFW *Dallas, TX*

- Spearheaded performance-driven initiatives by aligning with executives, data teams, and external partners to co-create a digital analytics framework, **improving stakeholder engagement by 40%** and driving measurable community impact.
- Supported event organization and **post-event analysis**; compiled sponsor engagement stats and created a **data-driven plan** to raise next-year sponsor involvement.

Data Engineer **May 2020 - Jul 2023**
TransUnion

- **Defined and executed** the roadmap for an in-house **address standardization** solution; aligned cross-functional teams and **eliminated third-party dependency**, saving **$120K/year**.
- Supported the **strategic shif**t from **on-premises infrastructure to AWS cloud** by containerizing legacy ETL applications and contributing to well-planned migration workflows.
- Designed an Ab Initio based archiving-purging framework, **boosting data efficiency by 25%** and **cutting storage costs by 30%**, contributing to a **20% operational expense reduction**, and improving overall system performance.
- Built a Python-based archiving framework using a driver table with directory paths, retention periods, and target locations to **automate compression** and **archival** to the **LTFS system** with **smart logic** and **dynamic naming**.
- Shaped the **analytics roadmap** for a driver score initiative; delivered KPI dashboards and integrated user feedback into iterative improvements.

- Translated evolving business needs into scalable, high-performance **ETL** configurations (Ab Initio, Python), improving maintainability and standardization.
- Utilized UNIX shell scripting to **automate archival** and cleanup tasks across ingestion pipelines.
- Optimized and developed **large-scale ETL** workflows using Ab Initio, reducing manual work by **10+ hours daily.**
- **Reverse-engineered** legacy jobs into modular ETL graphs with **reusable components**, cutting **dev time by 30%.**
- Deployed CI/CD automation across ETL environments and led **end-to-end validation** of data applications.
- Led a Scrum team of 4 members, fostering collaboration through **code reviews**, **knowledge transfer**, and demos.
- Liaised with internal analytics and product teams to gather **feature requirements** and align data architecture strategy.

Analyst (Ab Initio) **Feb 2020 - May 2020**

TransUnion

- Standardized ETL components for Community of Practice (CoP) team to **enhance reusability and compliance**.
- Managed deployment and job orchestration in Control Center and Jenkins for **production-grade** data flows.
- Debugged and validated production-grade ETL flows in Ab Initio; contributed to **root cause analysis** and **post-incident improvements** aligned with financial services **data governance standards**.

PROJECTS

End-to-End Azure Real-Time Weather Streaming

- Orchestrated **serverless ingestion** with **Azure Functions** (timer trigger) to call a weather API, **flatten** current/forecast/alert payloads, and publish JSON events to **Azure Event Hubs** using **Managed Identity** and **Azure Key Vault** secrets.
- Built **Databricks Structured Streaming** (Python) to fetch/merge data every **30 seconds** and send events to Event Hubs; configured **Key Vault–backed secret scopes** for secure connection strings.

Azure DevOps CI/CD Pipeline Simulation with Terraform

- Designed and implemented an end-to-end **CI/CD pipeline** using **Azure DevOps** to simulate enterprise software deployment workflows.
- Automated infrastructure provisioning with **Terraform** and created **staging** and **test environments** to replicate real-world corporate deployment scenarios.

Gen-Z Health Insurance Innovation Initiative (BlueBuddy) – UTD x C1 Innovation Lab

- Built a proof-of-concept AI medical assistant chatbot using OpenAI API and Geoapify to answer health-related queries and provide recommendations for nearby hospitals with estimated treatment costs based on user-described symptoms.
- Collaborated with stakeholders to define data guardrails and evaluate source quality for HIPAA-compliant downstream processing.

Cloud Data Platform Migration Hackathon

- Designed the migration plan and transitioned a legacy surveillance data system to a scalable **AWS-based data lake** using **AWS Glue** for **automated ETL of streaming and batch data**.
- Optimized **AWS Glue schema design** and **Athena queries**, reducing ETL processing time by **25%** and enabling secure, scalable analytics for ML models and dashboards.

Big Data Analytics for Trucking Risk Assessment

- Analyzed movement data from 100 trucks using **Hadoop** and **Spark** to identify safety risks and operational inefficiencies, enabling data-driven interventions in driver behavior and route planning
- Built interactive Tableau dashboards for real-time fleet insights, optimizing fuel usage and improving delivery reliability across operations.

EDUCATION

Master of Science in Management Information Systems, The University of Texas at Dallas

Graduate Certificate in Business Intelligence and Data Mining, The University of Texas at Dallas

Bachelor of Technology in Computer Science and Engineering, SRM University

CERTIFICATIONS

Microsoft Certified: Fabric Analytics Engineer Associate
AWS Certified Cloud Practitioner
AWS Certified Developer – Associate
AWS Academy Graduate – AWS Academy Data Engineering
Google Project Management Professional Certificate (v2)
SnowPro Associate: Platform Certification

LEADERSHIP & VOLUNTEER

- Graduate & International Affairs Chair, UTD Student Government
- Orientation Leader, The University of Texas at Dallas.