Nivash R – Professional Profile

Professional Summary

Nivash R is a highly motivated and versatile Software Engineer and Data Engineering Analyst, currently based in Coimbatore, with strong expertise spanning Data Engineering, Cloud Platforms, Generative AI, and Machine Learning. With over 2.5 years of professional experience, Nivash has developed advanced skills in Python programming, SQL-based querying, ETL pipeline development, and distributed data processing using PySpark, while simultaneously building deep knowledge in Generative AI and LLM-driven solutions.

His unique strength lies in combining solid data engineering foundations with cutting-edge AI technologies, enabling him to design pipelines that not only prepare, transform, and optimize data but also integrate seamlessly with AI models for end-to-end intelligent workflows. He has worked extensively on cloud platforms such as Google Cloud Platform (GCP) and Amazon Web Services (AWS), developing automation solutions, building cost-efficient pipelines, and integrating large-scale data for analytics and AI applications while ensuring operational efficiency and scalability.

In parallel, Nivash has cultivated advanced expertise in Generative AI, Large Language Models (LLMs), LangChain, Retrieval-Augmented Generation (RAG) pipelines, and prompt engineering, positioning himself at the intersection of Data Engineering and AI innovation. He has delivered solutions that involve LLM integration into data pipelines, prompt experimentation and evaluation with LLaMA models, and AI-driven workflow automation. His continuous self-learning and project-driven exploration into RAG-style retrieval systems demonstrate his ability to independently innovate while applying industry-leading practices.

Nivash also possesses strong capabilities in data visualization and analytics using Power BI, Tableau, and Looker, complementing his engineering and AI expertise by ensuring that data-driven insights are effectively communicated to stakeholders. This rare combination of engineering pipelines, AI integration, and analytics defines his professional edge in today's fast-evolving technological landscape.

Core Skills and Expertise

Programming Languages

Nivash's programming expertise centers on Python, which he has extensively leveraged across all facets of his professional journey. Python has been the foundation for designing ETL workflows, automating repetitive cloud-based tasks, developing AI-driven scripts, and integrating LLM-based systems. He has applied Python for structured data transformations, complex SQL-driven manipulations, API-based data extraction, and building AI-assisted

analytics workflows. This versatility allows him to bridge the gap between raw engineering tasks and intelligent automation, ensuring both technical efficiency and functional impact.

Cloud Platforms

Nivash has hands-on experience with Google Cloud Platform (GCP) and Amazon Web Services (AWS), leveraging the strengths of each to solve real-world data challenges. On GCP, he has utilized BigQuery for large-scale analytics, Pub/Sub and Cloud Functions for event-driven pipelines, Cloud Scheduler for task automation, Vertex AI for machine learning experimentation, and Application Integration for orchestrating complex workflows. On AWS, he has applied similar services for data engineering, cloud storage, and scalable ETL solutions. His expertise lies in designing optimized, cost-efficient, and reliable pipelines that ensure smooth operations while minimizing unnecessary cloud expenditure.

Data Engineering & Processing

Data Engineering forms the core of Nivash's professional expertise. He has architected ETL pipelines that extract raw data, perform advanced transformations using Python and SQL, and load optimized datasets into analytics platforms and AI workflows. His experience with PySpark enables him to handle distributed data processing effectively, ensuring that even very large datasets are transformed efficiently. He integrates workflow automation mechanisms that facilitate both batch and real-time data processing, creating pipelines that are technically robust, scalable, and aligned with business requirements.

AI, ML & Generative AI

A defining strength of Nivash's profile is his hybrid expertise in Generative AI and Data Engineering. He has worked extensively with Large Language Models (LLMs) and frameworks such as LangChain to design intelligent systems that leverage Retrieval-Augmented Generation (RAG) for accurate knowledge-driven responses. His experience in prompt engineering goes beyond mere prompt creation — he integrates LLaMA models into Python workflows to systematically evaluate prompt performance, capture metrics, and implement iterative improvements for AI response optimization.

Nivash has designed and implemented RAG-style retrieval systems as part of his self-driven learning and project development, enabling intelligent access to domain-specific knowledge in real-time. Alongside modern AI approaches, he maintains strong knowledge of classical Machine Learning (ML) and Deep Learning (DL) techniques, allowing him to bridge traditional and modern AI methodologies. Additionally, his experience in building AI agents demonstrates his readiness to develop autonomous systems capable of reasoning, decision-making, and task execution.

Data Visualization & Analytics

Nivash has a proven ability to present complex data through intuitive visualizations and analytical dashboards. He has utilized Power BI, Tableau, and Looker to transform raw data into

actionable business insights. Through Exploratory Data Analysis (EDA), he uncovers patterns, anomalies, and potential opportunities before moving datasets into production pipelines or AI systems. This combination of engineering rigor and analytical storytelling ensures stakeholders can make informed, data-backed decisions.

Version Control & Collaboration

In collaborative development environments, Nivash relies on Git for version control, applying structured branching, pull requests, and code reviews to maintain code clarity and quality. His experience in workflow management and cloud automation ensures that multi-stakeholder projects remain aligned, reproducible, and scalable. This disciplined approach enhances the reliability and robustness of his technical solutions while enabling seamless team collaboration.

Certifications

Nivash has earned multiple certifications that validate his expertise across cloud platforms, data engineering, and AI domains. He holds the **Associate Cloud Engineer (ACE) Certification from Google Cloud**, which demonstrates his proficiency in deploying, managing, and monitoring cloud-based applications, configuring cloud resources, and optimizing data workflows on GCP. Alongside this, he has earned the **AWS Data Engineering Certification**, reflecting his capability to design, implement, and maintain robust data pipelines, handle large-scale data processing, and leverage AWS services for scalable and efficient data engineering solutions.

In addition, Nivash has completed **Generative AI and Python certifications**, which highlight his advanced understanding of AI modeling, prompt engineering, and Python scripting for automation, data analysis, and intelligent workflow solutions. These certifications collectively affirm his technical expertise across multiple cloud ecosystems and AI frameworks, while also demonstrating his commitment to continuous learning, staying updated with emerging technologies, and strengthening his professional skill set to deliver high-impact data-driven solutions.

Projects

RAG-Based Chatbot with LangChain, Ollama, and Pinecone (Self-Driven Project)

Nivash independently designed and deployed a sophisticated AI-powered chatbot capable of handling document-based queries, showcasing a complete end-to-end Generative AI workflow. He developed a user interface using Streamlit and integrated the Ollama LLM for natural language understanding and response generation. The system implemented a

Retrieval-Augmented Generation (RAG) approach by combining LangChain with the Pinecone vector database, ensuring precise semantic search and accurate question answering from extensive document repositories. He designed custom text-splitting and embedding pipelines using mxbai-embed-large to process and index PDF documents efficiently. By iteratively designing and optimizing context-aware prompts, he guided the LLM toward concise, relevant responses. This project highlighted his ability to seamlessly combine data engineering, AI model integration, and interface design into a cohesive system capable of real-time interaction over large datasets.

FitBit Project – ETL Data Pipeline in Google Cloud

In this project, Nivash built a complete ETL pipeline to process employee fitness data, highlighting his expertise in cloud-based data engineering and automation. Using Python and the Faker library, he generated realistic datasets, stored them as CSVs, and uploaded them to Google Cloud Storage. The data underwent extensive transformation in Google Cloud Data Fusion, including masking sensitive information and merging first and last names. The cleaned datasets were loaded into BigQuery for efficient querying and interactive dashboards were built in Looker Studio to provide actionable insights on employee distribution, departmental statistics, and joining patterns. The entire workflow was automated using Google Cloud Composer. Nivash overcame challenges such as GCP quota limitations and Airflow DAG dependencies, demonstrating problem-solving skills and his ability to deliver scalable, enterprise-grade pipelines.

GCP Recommendation AI (POC Project)

Nivash played a crucial role in structuring large datasets to enable real-time, personalized recommendations. By cleaning and aligning product catalog and user event data with predefined schemas, he ensured consistency and readiness for analytical processing. Structured data was uploaded to BigQuery, forming a reliable foundation for a recommendation engine capable of dynamic adaptation to user behavior. This project emphasized his ability to handle complex data engineering challenges, transform and structure data, and optimize datasets for AI-driven recommendation systems.

Google Cloud Platform (GCP) Automation

Task 1: Resource Cleanup – Deleting Aged Snapshots, Disks, and VMs

Nivash designed an automated workflow to maintain cloud hygiene and cost efficiency in GCP. Using Cloud Custodian and Python scripts, he identified and safely deleted aged snapshots, disks, and VMs beyond retention periods. The process was scheduled via Cloud Scheduler, with logs captured in Cloud Logging and email notifications sent to administrators. This automation reduced cloud costs, prevented resource clutter, and ensured compliance with governance policies.

Task 2: Resource and Access Management – Stopping Resources During Non-Working Hours & Restricting User Access

He implemented a system to stop compute resources during non-working hours and revoke expired user access automatically. Python scripts and Cloud Custodian policies were executed via Cloud Functions and scheduled using Cloud Scheduler. User access governance tracked requests and automatically revoked IAM roles after expiration. Logs and notifications provided transparency and accountability. This approach optimized cloud spending, maintained operational efficiency, enforced compliance, and delivered a scalable enterprise resource management solution.

Vertex AI – Prompt Engineering & Recommendation Updates (POC Project)

Nivash leveraged Vertex AI to generate dynamic, context-aware recommendations by experimenting with zero-shot, one-shot, and few-shot prompt engineering strategies. He iteratively refined prompts to enhance AI-generated suggestions, creating a feedback loop to continuously improve recommendation accuracy and user experience. This project highlighted his ability to design AI systems that intelligently adapt to changing inputs while integrating data pipelines and processing workflows for real-time insights.

Dialogue Flow & Intent Optimization – Internal CX Project (POC Project)

In an internal company project, Nivash enhanced a chatbot to improve query accuracy and reliability. He analyzed fallback intents, identified conversational gaps, and created new intents based on frequently asked questions. His data-driven approach reduced fallback responses, optimized chatbot performance, and ensured employees received accurate and helpful answers consistently. This project demonstrated his ability to combine AI workflow understanding, data analytics, and process optimization to directly impact operational efficiency and user satisfaction.

LLM Data Pipeline & Annotation Analytics (Meta)

At Meta, Nivash focused on improving data quality and annotation workflows for Generative AI projects. He developed Python scripts and SQL queries to clean, transform, and structure large datasets for LLM training, ensuring high-quality input for model performance. Integrating LLaMA models into Python workflows, he systematically evaluated prompt effectiveness, captured responses, and analyzed results to optimize AI interactions. Interactive dashboards visualized annotation quality and model outputs, enabling teams to track performance and adjust LLM training datasets accordingly. His contributions significantly enhanced the efficiency and accuracy of AI model training, blending data engineering expertise with practical Generative AI implementation and analytical rigor.

Education

Bachelor of Technology (B.Tech) in Information Technology
Kongu Engineering College, Erode, Tamil Nadu
📆 2018 – 2022 | **GPA:** 8.2

Nivash completed his B.Tech in Information Technology with a strong academic record, achieving a GPA of 8.2. During his undergraduate studies, he developed a solid foundation in core IT concepts including programming, database management, networking, software engineering, and data structures. He actively engaged in hands-on projects and practical assignments, which enhanced his understanding of web development, cloud computing fundamentals, and data processing techniques. His education not only strengthened his technical expertise but also nurtured analytical thinking, problem-solving skills, and a systematic approach to designing scalable software applications and data pipelines, laying the groundwork for his career in data engineering, cloud platforms, and AI technologies.

Contact

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