Payal Goyal

Backend Developer | Data Engineering Enthusiast | Actively Seeking Returnship / Reentry Roles
+91 95739 45583 | payalgoyal90@gmail.com | India

Professional Summary

Software Engineer with 2+ years of experience at Tata Consultancy Services and 2+ years of self-initiated project development during career break. Strong expertise in Python, Flask, PySpark, SQL, and production-grade ETL pipelines. Delivered both batch and streaming data pipelines using Apache Airflow and AWS Kinesis (Glue, Athena, Lambda). Actively seeking backend or data engineering roles leveraging my strong ETL orchestration, cloud skills, and hands-on coding experience.

Skills

- Languages: Python, JavaScript, SQL
- Backend & Web: Flask, Node.js, REST APIs, Axios
- Frontend: React.js, HTML5, CSS3, Bootstrap, Tailwind CSS, Streamlit
- Data Engineering: PySpark, Apache Airflow, MySQL, Batch & Streaming ETL, RDBMS
- Cloud & Tools: AWS (Kinesis, Glue, Athena, Lambda, S3, QuickSight), Git, GitHub, VS Code, Jupyter

Projects

Retail Analytics ETL Pipeline (Airflow Orchestration + MySQL + Streamlit)

GitHub: https://github.com/payalgoyal/retail-analytics-pipeline

Tech Stack: Python, Pandas, MySQL, Airflow, Seaborn, SQLAlchemy, Streamlit, Faker

- Built end-to-end batch ETL pipeline for Retail Analytics using **Airflow orchestration** with full task-level modularization.
- Designed multi-stage DAG with task dependencies: Extraction → Cleaning → Transformation → Loading → Analysis.
- Added **scheduling, retries, SLA monitoring, and backfill readiness** for production-grade pipeline stability.
- Implemented separate ETL functions and Python modules for scalable and reusable code structure.
- Cleaned and enriched UCI Retail + synthetic customer data, calculated RFM segments, KPIs, top customers & revenue trends.
- Loaded Gold-layer data into MySQL using SQLAlchemy; built multiple KPI visualizations in Streamlit and Seaborn.

Bank Marketing Real-Time Data Pipeline on AWS

Goal: To build a cloud-native real-time data pipeline for processing marketing campaign data and analyzing customer deposit behavior by job, age, and education.

GitHub: github.com/payalgoyal/Bank-Marketing-ETL-AWS

Tech Stack: AWS Kinesis, Lambda, S3, Glue (PySpark), Athena, QuickSight, Medallion Architecture

- Designed and deployed an end-to-end real-time ETL pipeline using AWS services following Medallion Architecture (Bronze → Silver → Gold)
- Streamed marketing data via Kinesis, processed events with Lambda, and stored raw data in S3 Bronze layer
- Cleaned and normalized streaming data using Glue PySpark jobs; wrote structured output to Silver layer in JSON
- Aggregated business insights like deposit rates by job, age, and education; stored results in Gold layer
- Enabled ad-hoc SQL analysis using Athena, and built interactive dashboards in QuickSight
- Demonstrated data lake design, real-time ingestion, ETL transformation, and cloud-native insight delivery

Accounting Dashboard Project

Tech Stack: Python, PySpark, MySQL, Matplotlib

- Built a financial dashboard to automate analysis of Tally-generated CSV reports.
- Created ingestion pipelines and ETL flows using PySpark (groupBy, joins, aggregations).
- Delivered data visualizations showing receivables and cash flow trends.

PySpark Learning App

GitHub: https://github.com/payalgoyal/pyspark-learning-app.git

Tech Stack: Flask, PySpark, Python, CSV, JSON
- Created an interactive educational app for PySpark learners.
- Developed Flask APIs to serve lessons, quizzes, and datasets dynamically.

Returnship Readiness & Upskilling Highlights

- Delivered business-ready insights such as product revenue trends, customer segmentation, and operational dashboards.
- Practicing daily Git, SQL, Python ETL, Jupyter analysis, and Airflow orchestration.
- Migrated all project pipelines into GitHub with modular code architecture, reusable ETL functions, and automated data loaders.

Career Break

2017 – 2025

- Focused on health recovery and technical upskilling during career break.
- Built fully functional data engineering portfolio with real-world project simulations using production-grade technologies.

Professional Experience

Freelance Web Developer

Dec 2015 - Jul 2017

- Built responsive websites using HTML, CSS, and JS for local businesses.

Tata Consultancy Services (TCS) - Software Engineer

Jul 2013 – Nov 2015

- Developed custom CRM modules using Microsoft Dynamics and SSRS.
- Created automation scripts in Python for error tracking and reporting.
- Awarded 'Shining Star' for top performance and client appreciation.

ISRO - MATLAB Developer (Intern)

Jan 2013 – May 2013

- Developed tools for satellite image processing.
- Co-authored research publications with the R&D team.

Education

B.Tech - Computer Science & Engineering
Sikkim Manipal Institute of Technology | 2009-2013
CGPA: 8.6 / 10
Recipient of Merit Scholarship (All Semesters)

Awards & Recognition

- Shining Star, TCS (2015)
- SMIT Merit Scholar, All Semesters