

# Archil Chachanidze

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## Professional Summary

Data Engineer with 7+ years building production-grade data platforms and 8+ years hands-on experience with Python. Specialized in designing high-reliability pipelines on Google Cloud Platform using BigQuery, Airflow, and event-driven architectures. Proven track record delivering solutions processing millions of rows daily with 99.9% uptime. Strong foundation in backend development with FastAPI, chaos engineering frameworks, and scalable data generation systems. Experienced collaborating with cross-functional teams to architect data-driven solutions.

## Skills

**Programming Languages:** Python (advanced), SQL, JavaScript

**Cloud Platforms:** Google Cloud Platform (BigQuery, Cloud Functions, Cloud Run, Cloud Storage, Pub/Sub, Cloud Scheduler, Composer/Airflow)

**Data Engineering:** ETL/ELT pipelines, Apache Airflow orchestration, data modeling, schema design, data validation frameworks, batch processing, event-driven architecture, streaming data pipelines

**Backend Development:** FastAPI, REST APIs, WebSocket streaming, Redis, PostgreSQL, Docker, microservices architecture

**Data Processing:** Pandas, distributed processing patterns

**DevOps & Infrastructure:** Docker, Kubernetes, Terraform, CI/CD pipelines (GitHub Actions), Git, Linux administration, Prometheus, Grafana

**Data Sources & Integrations:** Google Analytics 4, Campaign Manager 360, Adobe Analytics, PowerBI, FTP/SFTP, external APIs

**Testing & Quality:** Pytest, chaos engineering, data quality frameworks, anomaly detection, observability

**Familiar with:** Apache Spark, dbt, Snowflake, Databricks, AWS, Azure

## Experience

- **Senior Data Engineer**

*Sweet Digital / Making Science* | December 2021 – Present

- Architected and maintain production data pipelines processing 1-5 million rows daily across multiple business units, achieving 99.9% uptime through comprehensive monitoring and validation frameworks
- Designed modular, configuration-driven pipeline framework supporting 50+ production DAGs with 500+ orchestrated tasks using Apache Airflow and Google Cloud Platform services

- Built end-to-end marketing analytics pipelines integrating Google Analytics 4, Campaign Manager 360, and Adobe Analytics data sources into BigQuery for downstream reporting and analysis
  - Reduced pipeline failures by 40% through implementation of idempotent processing patterns, comprehensive data validation, and automated error handling mechanisms
  - Developed template-based deployment system enabling rapid integration of new data sources through single configuration file, significantly reducing implementation time
  - Led 1-year migration project transforming 100+ legacy scripts into cloud-native GCP architecture with version control, automated testing, and monitoring
  - Collaborated with marketing stakeholders and data analysts to translate business requirements into technical specifications and reliable data models
- **Python Backend Developer**  
*Olmaid* | October 2020 – November 2021
    - Developed backend services and data integration pipelines using Google Cloud Functions and Cloud Run for customer-facing applications
    - Implemented CI/CD pipelines and automated testing frameworks ensuring stable production deployments
- **Freelance Data Engineer / Consultant**  
*Various Clients* | November 2019 – October 2020
    - Delivered automation tools and data pipeline solutions for e-commerce and analytics clients, managing complete project lifecycle from requirements to deployment
    - Built web scrapers, REST API integrations, and ETL processes with deployment on Linux infrastructure
- **DevOps Engineer**  
*Birtvi* | July 2019 – November 2019
    - Maintained Kubernetes clusters and Dockerized services, improving system reliability and deployment efficiency
- **Python Programmer**  
*Birtvi* | October 2018 – July 2019
    - Developed automated trading systems integrating multiple cryptocurrency exchange APIs with real-time data processing and decision-making logic
- **IT Support & System Administration**  
*Various Organizations* | 2013 – 2017
    - Managed Linux servers, POS systems, and automated business processes across retail organizations, building technical foundation for data engineering career

## Notable Projects

### Mock Data Engine API (Open Source)

*GitHub:* [github.com/psarchi/mock-data-engine-api](https://github.com/psarchi/mock-data-engine-api)

- Architected production-grade FastAPI service for generating realistic mock data via declarative YAML schemas, designed for testing data pipelines and ETL processes at scale
- Implemented dual-layer persistence architecture using Redis (hot cache, 24h TTL) and PostgreSQL (durable storage) with automatic failover and 30-day retention policies
- Built WebSocket streaming endpoint supporting 20,000+ items/second throughput with configurable rate limiting and background pre-generation workers
- Developed chaos engineering framework with 20+ fault injection operations (latency, schema drift, data corruption, partial failures) for resilience testing
- Integrated comprehensive observability stack including Prometheus metrics, Grafana dashboards, and structured JSON logging for production monitoring
- Tech stack: Python, FastAPI, Redis, PostgreSQL, Docker, GitHub Actions CI/CD, Prometheus, Grafana

### Marketing Analytics Platform Redesign

- Led end-to-end redesign of analytics infrastructure serving 3 cross-functional teams, unifying fragmented data sources into automated Airflow pipelines
- Reduced SLA breaches by 40% and eliminated 15 hours per week of manual reporting effort, enabling real-time campaign optimization

### Historical Data Normalization & Cloud Migration

- Standardized 100+ GB of inconsistent legacy data into schema-versioned BigQuery tables with comprehensive validation, enabling reliable historical reporting while maintaining compliance requirements

### Automated Analytics ETL System

- Built fully automated ingestion pipeline for Adobe Analytics using Cloud Functions and Cloud Scheduler, reducing manual reporting time from hours to minutes with resilient error handling

## Certifications

- Google Cloud Certified – Professional Data Engineer (In Progress)