COLIN BURKE

Data & Analytics Engineer

San Jose, CA | Colinburke594@gmail.com | linkedin.com/in/colin-james-burke | colinburke.me | github.com/colinburke594

SUMMARY

Data engineer with a UC Irvine background in Finance and Information Systems and six years in the fitness industry. Currently designing and running a production financial data pipeline for a nonprofit: four payment APIs into PostgreSQL with automated transformations, a live executive dashboard, and a budget-vs-projection alert engine reporting to the board. Builds time-series analysis pipelines on Apple Health sensor data as an endurance athlete, with a focus on data quality, validation, and clear communication of results.

SKILLS

Languages & Data: Python (pandas, PySpark), SQL (PostgreSQL), Spark / Databricks (Delta Lake), dbt, REST APIs (OAuth)

Tools & Platforms: Docker, Git / GitHub (CI/CD), Tableau, n8n, Railway, Vercel, React, Excel, Linux

AI-Accelerated Development: Claude Code and LLM-assisted workflows for pipeline development, debugging, and automated reporting

PROFESSIONAL EXPERIENCE

Data Engineer & BI Consultant (Freelance) March 2025 – Present

Los Angeles Center of Photography · Remote

- Engineered a three-workflow production ETL pipeline ingesting and normalizing transactions from four payment APIs (PayPal, Authorize.net, Event Espresso, Plaid) into a centralized PostgreSQL warehouse, eliminating 30+ minutes of daily manual processing.
- Built validation and reconciliation logic comparing API transaction data against accounting records by transaction ID across 8 months and ~$400K of revenue, catching misclassified vendor payouts and duplicate fee entries that were inflating KPIs.
- Designed and deployed a live BI dashboard surfacing real-time KPIs, program-level revenue, and budget-vs-actual performance, presented directly to the board for strategic oversight.
- Reduced reactive financial decision-making with an automated alert engine comparing YTD revenue to time-adjusted projections per program, triggering tiered email notifications to leadership when gaps are detected.
- Deployed and maintained full production infrastructure (CI/CD via GitHub, cloud hosting, PostgreSQL backend, Claude-powered AI reporting layer), delivering a sustainable low-maintenance system for a resource-constrained nonprofit.

Founder & Personal Trainer January 2019 – June 2025

Burke Strength / Anteater Recreation Center · Los Gatos & Irvine, CA

- Founded and grew a personal training business serving 40+ clients through business development, client management, and marketing.
- Designed personalized training programs using longitudinal client metrics (body composition, strength, endurance benchmarks) to drive measurable health outcomes, building six years of hands-on fitness-domain expertise.

PROJECTS

Apple Health Sensor Data Pipeline August 2026

Python · PySpark · PostgreSQL · Docker

- Built an end-to-end pipeline processing multi-year time-series sensor data from Apple Watch (heart rate, GPS, pace, cadence, workouts): XML ingestion into Dockerized PostgreSQL with PySpark transformations into per-workout and weekly training metrics.
- Developed automated data quality checks validating device-derived metrics against independently computed ground truth: recomputing pace from GPS distance and duration, flagging physiologically implausible heart-rate readings, and detecting sensor dropouts, delivered as an automated QA report.
- Visualized training load, cadence trends, and heart-rate zones in an interactive dashboard used to guide marathon training decisions.

S&P 500 Sector Performance Analysis January 2026

Python · pandas · FastAPI · SQLite · Chart.js

- Built a full Python data pipeline analyzing 1,256 trading days across all 11 SPDR sector ETFs (2021–2026), with a FastAPI backend and interactive visualizations covering Sharpe ratios, correlation matrices, and drawdown analysis; max-Sharpe portfolio returned +115% vs. a +74.6% equal-weight benchmark.

AI Face Morphing Video Effect January 2026

Python · Computer Vision · Facial Landmark Alignment

- Developed an AI-powered video effect seamlessly transitioning between individuals' facial features using facial landmark alignment; commissioned by a professional photographer, exhibited at the Los Angeles Center of Photography, and cited by the LA Times (February 2026).

EDUCATION & CERTIFICATIONS

University of California, Irvine | B.A. Business Administration (Finance & Information Systems) June 2025

DataExpert.io | The Rise of the AI Data Engineer (Databricks, Spark, Delta Lake, AI agents) August 2026

Google | Data Analytics Professional Certificate January 2026

NASM | Certified Personal Trainer January 2023