HENISH PATEL

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PROFESSIONAL SUMMARY

B.Sc. Computer Science graduate (Algoma University, expected December 2026) specializing in data engineering, analytics pipelines, and machine learning systems. Experienced in building reproducible ETL pipelines with SQL, Python, dbt, DuckDB, and Dagster. Committed to test-driven software engineering, measuring model baselines, and documenting failure limits alongside results.

TECHNICAL SKILLS

Languages: SQL, Python, TypeScript, JavaScript, HTML/CSS

Data Engineering: dbt, Dagster, DuckDB, PostgreSQL, Pandera, Docker, GitHub Actions

Data Analysis & ML: pandas, NumPy, scikit-learn, XGBoost, SHAP, statistical evaluation, exploratory data analysis

Web & Infrastructure: Next.js, React, Node.js, FastAPI, Firebase, Vitest, CI/CD

PROFESSIONAL EXPERIENCE

Software Engineer (Data and AI)

Feb 2025 – Mar 2026

FrancoBuddy · Part-time alongside studies · Brampton, ON

- Engineered web application architecture for French TEF examination preparation, supporting practice modules and AI-assisted speaking and writing scoring.
- Moved AI scoring execution from client-side execution to secure server endpoints, enforcing per-student daily quota caps, rate limits, and burst protection to prevent unintended API spending.
- Removed a build-error bypass, methodically resolved 124 hidden TypeScript type errors down to 0, and expanded unit test coverage to 136 passing Vitest tests.
- Configured automated CI pipelines with linting, static typechecking, unit tests, and automated secret scanning on pull requests.
- Hardened Cloud Firestore security rules, fixing mock administrator roles to prevent unauthorized role escalation.

Peer Tutor and Note Taker

Mar 2025 – Present

Algoma University · Academic Support Services · Brampton, ON

- Provide one-on-one academic tutoring to undergraduate students in SQL, Python programming, and fundamental computer science concepts.
- Produce clear, structured lecture notes and study summaries for students registered with accessibility and accommodation services.

Orientation Leader

Aug 2024 – Mar 2025

Algoma University · Student Life · Brampton, ON

- Guided incoming student cohorts through campus technology setups, academic advising resources, and orientation workshops.

TECHNICAL PROJECTS & CASE STUDIES

Maple Civic Data Lab

Python, dbt, Dagster, DuckDB, Streamlit

- Built end-to-end data pipeline orchestrating 6 Canadian public datasets with DuckDB, 69 passing dbt models, and 13 automated data quality checks.
- Documented grain reconciliation in an Architecture Decision Record (ADR 0001) resolving a 12x join fan-out between yearly rent and monthly unemployment datasets.

AI-Labour Paradox Simulator (Model Audit)

Python, scikit-learn, XGBoost, SHAP, FastAPI

- Conducted diagnostic analysis of a 93% accuracy classification model, identifying circular target leakage; benchmarked against a 77% majority baseline and 91% logistic baseline.
- Wrote a Model Card and put the circularity warning at the top of the README, so readers see the limit before the result.

Habitrage (Personal Finance Engine)

PostgreSQL, Prisma, TypeScript, Next.js

- Built double-entry accounting ledger with automated Data Health reconciliation, identifying drift between stored balances and transaction lines on synthetic data.

EDUCATION

Algoma University

Expected Dec 2026

Bachelor of Science in Computer Science (3-Year General Degree) · Brampton, ON