Zarnab Haider

Charlottesville, VA | mhaider.biz@gmail.com | mhaider.dev | github.com/zarnab222-dev

Software Engineer | Python, SQL, C#/.NET, PostgreSQL, Data Pipelines, CI/CD

SUMMARY

Software engineer who builds data systems and the checks that prove they are correct: a zero-downtime financial reporting migration at Microsoft (up to 200x faster filtering), and tested, CI-deployed Python, PostgreSQL, and ML projects since April 2026.

EXPERIENCE

Independent Software Engineer, Charlottesville, VA — Apr 2026 to Present

Ship full-stack, data, and ML software with tests and CI; about 1,990 commits across 30+ public repos.

Indigo Circuit | github.com/zarnab222-dev/indigo-circuit — May 2026 to Present

- Built and deployed a Pokemon TCG analytics app (Python ingestion, Glicko-2 ratings, dbt on DuckDB, Flask).
- Replaced Snowflake with free DuckDB after burning through about $150 in credits.
- Cut nightly read blocking from ~9 minutes to under 1 second with atomic shadow builds and a fail-closed gate.

C-1N hexapod | github.com/zarnab222-dev/spider — Aug 2026 to Sep 2026

- Built a PyTorch PPO pipeline for a six-legged MuJoCo robot.
- Mean-policy speed rose from 0.318 to 0.888 m/s with zero falls in 24 evaluations.
- Expanded it from 12 to 18 joints and ported the policy to the browser via WebAssembly within 1.21e-6 qpos of native.

LM Lab | github.com/zarnab222-dev/lmlab — Aug 2026 to Present

- Built a PyTorch transformer (BPE, causal attention) and ran 39 seeded runs (1 to 8 blocks: held-out loss 3.529 to 3.337 nats/token).
- Benchmarked fused Triton softmax behind a 462-case correctness gate.

University of Virginia, IT Analyst Intermediate, BI Developer, Charlottesville, VA — May 2025 to Mar 2026

- Owned 20+ SQL-backed Tableau dashboards for department leads across Facilities Management, from interviews through deployment and support, including ReUSE Store impact reporting with over 400 views; wrote shared SQL metric definitions.
- Reconciled conflicting purchase-order states across financial systems; built a dashboard surfacing the deltas and their financial impact across purchase orders worth millions of dollars.
- Contributed to a collaborative, telemetry-driven team effort that cut organization-wide dashboard load times by about 20%.

Microsoft, Software Engineer I, Redmond, WA — Jul 2021 to Jul 2024

- Owned a zero-downtime SSAS Multidimensional-to-Tabular migration of an internal financial reporting platform for planning and financial close; defined parity checks, monitored four weeks of pipeline behavior, and kept the legacy service up until cutover.
- Wrote Azure Data Factory scripts for daily pipeline monitoring and extended automated legacy-to-Tabular reconciliation; result: up to 200x faster filtering and ~4x faster Excel loading (telemetry).
- Built and maintained Azure reporting pipelines (Azure Synapse, Kusto, SQL, C#/.NET); used Python daily from the second year on, on the team's Spark-based platform; Power BI dashboards (basic DAX); built a full-stack C#/.NET configuration prototype.

PROJECTS

Log Pose | Python, PostgreSQL, SQLite, Vercel | logpose.mhaider.dev — Sep 2026 to Oct 2026

- Built a Python/PostgreSQL evidence store over 18,076 dated rows from 14 pinned sources behind a versioned read-only API; PR CI runs disposable PostgreSQL integration tests, and a daily smoke check verifies the live deploy.

Receipts | JavaScript, Chrome extension, Java | receipts.mhaider.dev — Sep 2026 to Oct 2026

- Built a private-by-design Chrome extension and viewer over FEC and Congress data for 539 members (no accounts, analytics, or runtime API calls; tests cover hostile page mutations), plus a Java RuneLite plugin on the same pipeline.

Magnet | Tauri, Rust, Svelte, TypeScript | github.com/zarnab222-dev/magnet — Aug 2026

- Built a keyboard-forward Windows Spotify client; every release tag builds an NSIS installer on a clean GitHub Actions Windows runner (3 alpha releases).

shin86 | TypeScript, Web Audio | shin86dev.itch.io — 2026

- Publish creative tools and assets, including Afterimage (a music release clip maker) and OBS stinger and overlay packs; built nebvis, a browser music visualizer for tab, mic, or local audio.

SKILLS

Languages: Python, SQL, C#, JavaScript, TypeScript, Java, R
Backend and data: PostgreSQL, SQLite, DuckDB, dbt, Flask, C#/.NET, Azure Data Factory, Azure Synapse, Kusto (KQL), SSAS Tabular
Delivery: Git, GitHub Actions CI/CD, integration testing, Docker (CI builds), Vercel, Railway, Cloudflare Workers
ML, web, BI: PyTorch, PPO, MuJoCo, Triton; React, Node.js, WebAssembly; Power BI (basic DAX), Tableau

EDUCATION

Virginia Tech, B.S. in Statistics, Blacksburg, VA — 2021