

David Sillman

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PROFESSIONAL SUMMARY

Senior Data Engineer with 4+ years architecting data pipelines and cloud infrastructure at scale. Expert in dbt, Snowflake, and Airflow with deep Terraform/OpenTofu proficiency on AWS and Cloudflare. Bridges analytics and software engineering, relishing the challenges of designing cloud-native solutions for clinical and commercial reporting while championing CI/CD, IaC, and agentic AI tooling. Strong foundation in Python, Rust, and SQL.

TECHNICAL SKILLS

Category	Technologies
Languages	Python, Rust, SQL, TypeScript, R
Data & Pipelines	dbt, Snowflake, Databricks, Apache Airflow, PySpark, Polars
Cloud & IaC	AWS, Cloudflare, Terraform / OpenTofu, Ansible
Platform & DevOps	HashiCorp Vault, JFrog Artifactory, GitLab CI/CD, GitHub Actions, Docker
Web & Visualization	FastAPI, Plotly, Streamlit, Tableau, React
AI & Automation	Agentic AI tooling, custom ACP integrations

PROFESSIONAL EXPERIENCE

Intuitive Surgical | Sunnyvale, CA

Senior Data Engineer | October 2025 – Present

Data Engineer | March 2024 – September 2025

Advanced Data Analyst | July 2022 – February 2024

Data Science Intern | May 2020 – June 2022

- Architected Data Pipelines:** Deployed cloud-based pipelines for clinical and commercial analytics using **dbt**, **Snowflake**, and **Databricks**.
- Orchestrated Workflows:** Built periodic data collection tools with **Python** and **Apache Airflow** for reliable downstream ingestion.
- Managed Cloud Infrastructure:** Owned **Terraform/OpenTofu** on **AWS**, administering **HashiCorp Vault** and **JFrog Artifactory** for a multi-tenant organization; uses **Ansible** for onboarding automation.
- Led Agentic AI Integration:** Drove adoption of agentic AI tools on the Ion data team, authoring shared skills and scripts via the company's custom **ACP**.
- High-Speed Data Processor:** Built a multi-threaded, **GB/s** file processor in **Rust**, eliminating ingestion bottlenecks.
- Engineering Best Practices:** Enforced **automated CI/CD** testing and documentation in **GitLab** (work) and **GitHub Actions** (personal), improving code quality and velocity.
- Optimized Data Processing:** Migrated in-memory Python scripts to **SQL** in cloud warehouses and **PySpark** for lazy out-of-memory operations.
- Analyzed Clinical Data:** Parsed and organized Ion System usage data with **Python**, **Pandas**, and **MSSQL**; built internal web apps including a **Dash/Plotly** dashboard and a **React.js/VTK.js** 3D geometry viewer.

SELECT PROJECT HIGHLIGHTS

- decision-tree-stuff:** Binary decision tree classifier supporting lazy and eager Polars DataFrames in Python.
- yaml-reference-***: Python/TypeScript library for resolving YAML documents with custom referential tags; test-driven, multi-language.
- Various **Terraform** and **Cloudflare** projects on GitHub, including IaC-managed Workers, DNS, and tunnel deployments for personal cloud infrastructure.

EDUCATION

Purdue University | West Lafayette, IN

Bachelor of Science (B.S.) in Data Science and Mathematics (Double Major) | August 2018 – May 2022