Stacie Herda

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SUMMARY

Software Engineer with an M.S. in Computer Science and a B.S. in Chemical Engineering. Experience in application development for chemical procedures, applied machine learning, and large-scale data analysis. Strong in designing data pipelines with mathematical modeling and 3D visualizations.

EXPERIENCE

Career Break & Bereavement Feb. 2026 – Present

- Took time off for family bereavement. Fully available now and actively seeking opportunities.

Software Engineer (Performance), IBM, San Jose, CA Jan. 2024 – Jan. 2026

- Deployed Docker-based environments across 5+ nodes to standardize distributed test infrastructure.
- Performed large-scale analysis across 10+ release cycles to detect regressions in distributed systems.
- Analyzed system metrics and query behavior across 50+ scenarios to identify performance anomalies.
- Automated validation workflows for databases under TB-scale load, insert, and query operations.

Process Engineer, Northrop Grumman, Santa Rosa, CA Mar. 2021 – Dec. 2023

- Performed EDA and anomaly detection across 350+ datasets using Python and R for data validation.
- Designed and deployed .NET C# inventory tracking applications to save $20K in initial costs.
- Developed VBA/C# data pipelines to ingest and transform GBs of data from 2,000+ files into MSSQL.
- Developed SSRS dashboards and SQL reports for multi-GB datasets and improved legacy R codebase.

Process Engineer, Associate, TSI Semiconductors, Roseville, CA Sep. 2019 – Feb. 2021

- Created VBA scripts for data parsing and cleaning to reduce processing time up to 80%.
- Built Python automation scripts to decrease manual task time from 30 minutes to less than 5.
- Tuned thin film parameters to meet client specifications for multi-thousand-dollar product lots.
- Applied statistical process control (SPC) techniques to monitor manufacturing data quality.

PROJECTS

stacieherda.com

3D Cortical Spreading Depression Visualizer: Built a 3D brain model that simulates the visual propagation of a depolarization wave across the cortex based on user triggers.

Data Center Thermal Digital Twin: Engineered a 3D simulation in NVIDIA Omniverse that integrates Kaggle thermal data and XGBoost to visualize heat distribution and remotely predict inefficiencies.

SKILLS

Languages: Python, C# (.NET), SQL/T-SQL, R, VBA, HTML/CSS | **Application Development:** .NET, R Shiny, Flask, Distributed Systems | **Data & Analytics:** ETL/ELT, EDA, Data Modeling, Validation | **DevOps:** Docker, Git, GitHub (CI/CD), Cloudflare Pages | **Machine Learning**: scikit-learn, PyTorch, TensorFlow, Keras | **Statistics:** Regression, Classification, Time Series | **Other:** SQL Server Databases

EDUCATION

M.S. Computer Science, University of Colorado, Boulder Graduated May 2025

B.S. Chemical Engineering, University of California, Davis Graduated Jun. 2019