Kiowa Wieser-Matthews

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Professional Summary

Software Engineer with 6+ years of experience building high-performance, data systems across Python, C/C++, Golang, and SQL. Specialized in scalable compute pipelines, reproducible workflows, and software supporting scientific, healthcare, and research environments. Specialization in GPU workload distribution and telemetry. Expertise in ARM computing.

Professional Experience

Medtronic — Software Test Engineer II

Mounds View, MN
08/2023 – Present

- Designed and validated automated data pipelines supporting regulated production and testing systems.
- Built Python and C validation frameworks with reproducibility and system reliability.
- Developed and maintained PostgreSQL systems for clinical and trial datasets.
- Supported embedded and production software releases in collaboration with cross-functional engineering teams.
- Integrated SAP and PowerBI workflows to improve data visibility and system observability.
- Contributed to software test methods supporting release of the Symplicity Spyral Renal Denervation System.

University of Minnesota — Senior Software Engineer

Minneapolis, MN
05/2021 – 08/2023

- Engineered Python and Golang pipelines for large genomic and spatial datasets.

- Optimized compute workflows for scalability, memory efficiency, and reproducibility.
- Collaborated with clinicians, genetic counselors, and researchers to deploy secure informatics tools.
- Translated research requirements into robust software systems supporting scientific discovery.
- Contributed to peer-reviewed publications through development of validated computational workflows.

Memorial Blood Centers — Data Scientist

Saint Paul, MN
02/2019 – 05/2021

- Built and optimized data platforms handling large, sensitive donor and patient datasets.
- Developed risk assessment and data ingestion systems integrating legacy and modern data sources.
- Improved system reliability, security, and performance across production analytics workflows.
- Ensured compliance with HIPAA and data privacy standards in all software solutions.

Medtox Laboratories — Data Scientist

St. Paul, MN
01/2018 – 02/2019

- Designed relational data systems supporting high-volume toxicology laboratory pipelines.
- Built data ingestion, validation, and cleaning pipelines to ensure accuracy and auditability.
- Led modernization efforts from paper-based workflows to centralized, scalable software platforms.
- Implemented secure access controls and compliant data handling practices for protected health information.
- Worked closely with laboratory staff and IT stakeholders to translate operational needs into software solutions.

Education

University of Minnesota – Twin Cities
M.S. in Bioinformatics & Computational Biology

Metropolitan State University
B.S. in Biochemistry

Technical Skills

Programming & Systems
Python, C, C++, C#, Golang, JavaScript, SQL

Compute & Machine Learning
PyTorch, TensorFlow, scikit-learn, Spark, Databricks

Pipelines & Workflow
Nextflow, Snakemake, Docker, Git, CI/CD

Cloud & Infrastructure
AWS (EC2, S3), Azure, Linux environments

Data & Compliance
PostgreSQL, HIPAA, FDA, CLIA, ISO standards