Kiowa Wieser-Matthews

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Professional Summary

Software Engineer with 15+ years of experience. I started writing code back in high school, and have done so professionally for BioTech Companies. I build genomics pipelines, train AI models on a GPU cluster I used to mine crypto with, and I'm working on a protein folding simulator that I hope will advance protein research.

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 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 research.
- 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 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