Contact

Palo Alto, CA
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Top Skills

PL/SQL
Microservices
ASP.NET

Languages

English (Full Professional)
Russian (Native or Bilingual)

Certifications

Creating Multi Task Models With Keras
Machine Learning Data Lifecycle in Production
Machine Learning Engineering for Production (MLOps) Specialization
Introduction to Machine Learning in Production
Analyze Datasets and Train ML Models using AutoML

Publications

A Survey of Stabilizing Generative Adversarial Networks
GANs in Digital Pathology

Gulnara Timokhina

Staff Software Engineer @ Thermo Fisher Scientific | Cloud Microservices, Data Science
San Francisco Bay Area

Summary

Thermo Fisher leverages over 20 years of engineering expertise to drive advancements in AI and machine learning applications within the life sciences domain. With a focus on cloud-native architectures, the team deploys scalable solutions that enhance mass spectrometry workflows, as exemplified by their patented chromatographic peak filtering model achieving 95% accuracy. Key contributions include designing predictive maintenance systems and integrating LLMs for compound identification, streamlining data analysis processes.

Prior roles at Provident Funding Associates reinforced a strong foundation in software engineering, regulatory compliance, and cross-functional collaboration. By designing machine learning pipelines for automated loan approvals and leading .NET-based enterprise lending solutions, the organization optimized operational efficiency.

Experience

Thermo Fisher Scientific

Staff Software Engineer - Cloud MicroServices and Data Sciences
June 2021 - June 2025 (4 years 1 month)
San Jose, California, United States

- Developed deep learning and gradient boosting models for chromatographic peak filtering, improving accuracy to 95%. Filed a patent for this innovation.
- Built an AI solution using LLMs to identify compounds and gradients for sample prep, improving data search efficiency.
- Designed a multi-output XGBoost model to predict mass spectrometry isotope patterns.
- Created a .NET service for real-time instrument data collection to enable predictive maintenance.
- Contributed to cloud-native ML deployment using Docker, Kubernetes, and AWS services.

Provident Funding Associates L.P.

Senior Software Engineer

February 2002 - May 2021 (19 years 4 months)

San Bruno, California, United States

- Designed a machine learning pipeline for automated loan approval, covering data prep, modeling, deployment, and monitoring.
- Led architecture and implementation of .NET-based lending solutions across the enterprise.
- Managed offshore development teams, setting timelines and overseeing project delivery.
- Engineered end-to-end mortgage lending software solutions to streamline loan processing and ensure regulatory compliance across financial institutions
- Collaborated with legal and financial executives to align business applications with regulatory standards and client requirements, improving cross-departmental efficiency
- Designed and implemented core business logic for calculating APR, payment schedules, and closing costs to ensure accuracy and consistency across all loan types
- Optimized SQL Server performance and data integrity by creating stored procedures, views, functions, and triggers, resulting in faster query execution and improved database security
- Developed RESTful web services to generate compliant borrower documents —such as closing disclosures and loan estimates—enhancing user experience and reducing manual workload
- Built validation services for total loan points and fees to ensure compliance with federal lending limits, reducing regulatory risk
- Implemented a Windows service to automate the creation and secure transmission of borrower documents, decreasing delivery time by 40%
- Delivered a Windows-based packaging system for investor communication using various protocols (e.g., SFTP, HTTP), improving reliability and partner satisfaction
- Created a secure check printing solution integrated with financial systems, reducing operational delays and minimizing manual errors

Education

San Jose State University

Master of Science - MS, Software Engineering, concentration in Data Science

Novosibirsk State University (NSU)

Bachelor of Science - BS, Applied Mathematics