

Nicolas Watkins

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SUMMARY

Vice President and **machine learning** engineering leader with nine years building production AI platforms for banking, payments, and regulated financial services. Brings hands-on command of Python, Java, Scala, Spark, Hadoop, ETL, relational and **non-relational databases**, cloud AI services, **on-premises** infrastructure, DevOps, and CI/CD. Converts **enterprise AI** strategy into reusable libraries, dependable data feeds, model lifecycle controls, and business-facing products across fraud, credit, servicing, and operations. Leads data scientists, IT engineers, risk partners, and executives through architecture, deployment, governance, and adoption decisions. Ready to bring practical platform leadership, clear communication, and responsible innovation to enterprise banking AI.

EXPERIENCE

VP, Enterprise AI Platforms

January 2024 - Present

BlueRidge Payments

Charlotte, NC

Direct enterprise AI platform strategy and operations across six business units, guiding architecture, reusable assets, governance, and executive investment decisions for fraud, credit, servicing, and document intelligence.

- Set **enterprise AI** platform direction for fraud, credit, servicing, and document intelligence across six business units.
- Unified **Hadoop**, **Spark**, AWS, and governed data stores through platform architecture decisions for production ML delivery.
- Created **Python** and **Scala** libraries for features, packaging, validation, monitoring, and rollback across model releases.
- Added **CI/CD** gates and infrastructure-as-code controls, improving traceability for governed model deployments.
- Sponsored GenAI self-help toolkit with retrieval, access controls, evaluation sets, and business interfaces for approved workflows.
- Translated lifecycle risks and architecture tradeoffs into sequenced funding priorities for non-technical executives.

Lead Machine Learning Platform Engineer

September 2021 - December 2023

Crescent Harbor Bank

Atlanta, GA

Owned platform engineering for lending and transaction monitoring services, connecting governed data products, repeatable training workflows, model serving, lifecycle evidence, and internal business interfaces.

- Owned production ML services connecting governed **data feeds** with repeatable training and inference workflows.
- Reworked Spark **ETL** for 85 million monthly transactions, adding quality checks, lineage, and recovery controls.
- Built **Java** and Python serving framework with APIs, containers, health checks, and versioned configuration.
- Documented assumptions, thresholds, approval evidence, and monitoring ownership with validators, risk officers, and business owners.
- Mentored eight engineers and **data scientists** on Git workflows, testing strategy, **deployment patterns**, and incident analysis.
- Delivered internal UIs for fraud and credit products, clarifying model outputs and operational exceptions.

Senior Machine Learning Engineer

June 2019 - August 2021

Northstar Consumer Finance

Raleigh, NC

Developed production classification and ranking solutions for delinquency outreach, application review, and payment-risk prioritization, moving exploratory work into tested services and governed releases.

- Developed Python and Scala models for delinquency outreach, application review, and payment-risk prioritization.
- Converted notebooks into tested services with feature contracts, scoring paths, registries, and repeatable releases.
- Connected PostgreSQL, MongoDB, Hadoop, and Spark through ETL workflows for training and production consumption.
- Implemented CI pipelines for tests, schema validation, artifact promotion, and security scanning before release.
- Traced score changes through upstream transformations, correcting **data feeds** before operational rollout.
- Authored runbooks and workshops that clarified model limits, monitoring signals, and deployment dependencies for stakeholders.

Machine Learning Engineer

June 2017 - May 2019

Meridian Analytics Group

Richmond, VA

Built supervised learning prototypes and production batch jobs for financial services clients, preparing data, tuning distributed workloads, packaging models, and explaining results for operational adoption.

- Built Python, Java, SQL, and Spark workflows that replaced manual spreadsheet analysis for financial clients.
- Prepared training datasets from relational and non-relational sources through documented ETL and reconciliation checks.
- Tuned Spark jobs and profiled Hadoop datasets, improving experimentation speed for large-scale **model development**.
- Packaged approved models with versioned dependencies, logging, monitoring, and handoff documentation for technology teams.

- Evaluated models with precision, recall, calibration, and out-of-time validation for operational review.
- Presented demos to client stakeholders, converting feedback into practical fraud and retention tools.

PROJECTS

Enterprise GenAI Self-Help Toolkit 📅 2025

Useful AI earns trust before it earns scale. Built a governed retrieval experience with access controls, evaluation sets, model monitoring, and business-facing interfaces for approved knowledge workflows.

Cross-Cloud Model Serving Fabric 📅 2023

A model has no value sitting in a notebook. Created portable serving patterns across on-premises and cloud environments using APIs, containers, health checks, and release controls.

LEADERSHIP & AWARDS

- Enterprise Innovation Leadership Award, BlueRidge Payments, 2025
- Operational Excellence Award, Crescent Harbor Bank, 2023
- Applied AI Delivery Award, Northstar Consumer Finance, 2020

EDUCATION

Bachelor's Degree in Computer Science

2017

Virginia Commonwealth University GPA: 3.7

Richmond, VA

Coursework: Machine Learning, Database Systems, Software Engineering, Distributed Computing

CERTIFICATIONS

- AWS Certified Machine Learning - Specialty 📅 2023
- Databricks Certified Machine Learning Professional 📅 2022
- Certified Kubernetes Application Developer 📅 2021

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, Scala
- **Distributed Processing:** Apache Spark, Hadoop, Databricks
- **Data Integration:** ETL, Apache Airflow, Data Lineage
- **Relational Databases:** PostgreSQL, Oracle, SQL
- **Non-Relational Databases:** MongoDB, DynamoDB, Redis
- **Cloud AI Services:** AWS SageMaker, AWS S3, AWS EMR
- **Containers and Orchestration:** Docker, Kubernetes, Amazon EKS
- **DevOps and CI/CD:** Git, Jenkins, GitHub Actions
- **Model Operations:** Model Registry, Model Monitoring, Model Rollback
- **ML Development:** Feature Engineering, Model Validation, ML Algorithms
- **Application Interfaces:** REST APIs, Internal UIs, User Interfaces
- **Infrastructure:** On-Premises Infrastructure, Infrastructure as Code, Linux

SKILLS

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|--------------------------------|-------------------------|----------------|-------------------|
| • Machine Learning Engineering | • Production Deployment | • SQL | • PostgreSQL |
| • Enterprise AI Platforms | • Python | • Apache Spark | • MongoDB |
| • ML Algorithms | • Java | • Hadoop | • AWS AI Services |
| • Model Lifecycle | • Scala | • ETL | |

PROFESSIONAL AFFILIATIONS

- Mentor, Charlotte Machine Learning Practitioners, 2024 - Present
- Advisory Member, Financial Services AI Governance Forum, 2023 - Present
- Volunteer Instructor, Code the Carolinas, 2021 - Present

LANGUAGES

- English (Native)
- Spanish (Intermediate)

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST