SUSHAN MANANDHAR

MLOps Engineer | Machine Learning Engineer

Ocean City, MD | manandhar204@gmail.com | sushanmanandhar.com | linkedin.com/in/sushanmanandharml

PROFESSIONAL SUMMARY

MLOps-focused software engineer with a B.S. in Computer Science and an M.S. in Information Technology. Builds reproducible ML pipelines, governed release gates, containerized APIs, model-supply-chain controls, infrastructure as code, and observable operations. Portfolio evidence includes three core systems, one supporting security artifact, and 252 passing automated tests.

CORE TECHNICAL SKILLS

MLOps and platform: Docker, Kubernetes, Terraform, MLflow, DVC, GitHub Actions, CI/CD, Prometheus, Grafana

Machine learning: Python, scikit-learn, TensorFlow/Keras, pandas, NumPy, SQL, classification, RAG evaluation

Serving and cloud: FastAPI, REST APIs, AWS ECS/Fargate infrastructure, Azure fundamentals, PostgreSQL, MySQL, MongoDB

Governance and security: Release gates, model provenance, Safetensors, AI-BOM, SARIF, drift signals, policy enforcement

SELECTED MLOPS PROJECTS

FraudShield MLOps Platform | Python, scikit-learn, FastAPI, DVC, MLflow, Kubernetes, Terraform

- Built a reproducible fraud-risk pipeline with parameterized training, schema validation, versioned stages and metadata, a typed inference API, and a regression-aware promotion gate.
- Measured 0.838 ROC-AUC and 0.757 recall on held-out synthetic data; added four automated tests, PSI drift reporting, Prometheus alerts, autoscaling, and AWS infrastructure definitions.

RAGOps Evaluation Platform | Python, FastAPI, RAG, Prometheus, Docker, Kubernetes, GitHub Actions

- Built a source-grounded RAG service with versioned knowledge and prompts, citations, abstention, prompt-injection and medical-safety guardrails, latency metrics, and release gating.
- Passed six automated tests and all seven controlled evaluation cases across retrieval, citation, grounding, safety, and latency criteria.

ModelGuard HF Supply Chain | Python, Hugging Face policy, Safetensors, AI-BOM, SARIF, GitHub Actions

- Built a fail-closed model-admission gate that performs static inspection without executing repository code or deserializing weights; enforces provenance, revision, license, file-type, size, and secret policies.
- Generated SHA-256 inventory, AI-BOM, SARIF, and incident-runbook evidence; six tests passed, the safe fixture was admitted, and the unsafe fixture was blocked with six high or critical findings.

SignalOps Paper Portfolio | Python, FastAPI, SQLite, Discord bot integration, Prometheus, Docker, Terraform

- Built an auditable paper-trading operations service that parses authorized alerts, rejects stale or duplicate events, applies symbol, stop-loss, and 2% allocation policies, and simulates deterministic fills.
- Made research evidence verification fail closed for malformed values, nested fields, and missing inputs; 236 tests pass.

PROFESSIONAL EXPERIENCE

Full Stack Software Engineer | Tooroot Consulting Services

- Developed React, Node.js, Express.js, and MongoDB applications and implemented REST interfaces connecting frontend and backend services.

Computer Science Grader | Idaho State University

- Evaluated assignments in algorithms, data structures, and software engineering and guided students on debugging, correctness, and code quality.

EDUCATION

Master of Science in Information Technology | University of the Cumberlands | Graduated August 2026

Relevant coursework: Data Mining, Artificial Intelligence, Database Systems, Human Computer Interaction, Operational Excellence

Bachelor of Science in Computer Science | Idaho State University

CERTIFICATIONS

IBM Python for Data Science AI and Development | IBM Introduction to Cloud Computing | IBM Developing Front End Applications with React