Mark Stevenson

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Data Scientist

Data Scientist with over a decade of experience designing and deploying data-driven solutions in production environments. Proven expertise in statistical modeling, ML, NLP pipelines, and operational analytics across cybersecurity, finance, blockchain, and marketplace domains. Skilled in collaborating with stakeholders to turn complex data into actionable insights.

EXPERIENCE

Senior AI Engineer | Copper River Cyber Solutions (FDA Contract)

Remote | Nov 2024 - Present

- Built adversarial testing and validation frameworks for generative AI triage tools in regulated FDA cybersecurity workflows.
- Developed agent-based pipelines integrating transformer embeddings and retrieval for document summarization and structured knowledge extraction.
- Designed drift detection and monitoring systems ensuring model reliability and audit readiness.
- Integrated natural language interfaces with Splunk telemetry for adaptive threat intelligence.
- Automated operational response pipelines using XSOAR playbooks and event-driven triggers.

Senior Data Scientist | Siemens DISW (Contract)

Remote | Jun 2024 - Nov 2024

- Engineered NLP pipelines with spaCy and scikit-learn to extract structured insights from corporate filings for BI teams.
- Built scalable embedding workflows deployed in vector databases for semantic search applications.
- Developed classification and causality models predicting acquisition signals from partnership and investment data.

Senior Data Scientist | Collectors Holdings

Remote | Jul 2021 - May 2024

- Built transformer-based models for entity recognition and bidder risk scoring, deploying APIs on AWS SageMaker with Docker orchestration.
- Designed ETL and dbt pipelines integrating unstructured data into operational ML systems, enhancing fraud detection and pricing tools.
- Led development of multivariate revenue forecasting models and mentored junior scientists on MLOps best practices.

Team Lead - Quantitative Modeling | Noblis (IRS Program)

May 2017 – Jul 2021

- Directed supervised and unsupervised modeling projects for behavioral anomaly detection and fraud prediction.
- Built NLP pipelines for fraudulent communication detection and integrated outputs with operational dashboards.
- Managed multi-million dollar projects, briefing executive stakeholders and supporting a \$55M recompete award.

Operations Research Analyst III | Engility Corp

Aug 2016 – May 2017

• Developed optimization models for sensor placement using simulation pipelines and multi-objective analysis.

Model Validation Analyst | Wintrust Financial Corp

Aug 2015 – Aug 2016

 Conducted model validation, stress testing, and audit-ready compliance reporting for financial forecasting systems.

RESEARCH

Blockchain Deanonymization Study (DePaul Capstone)

Developed temporal-behavioral clustering frameworks analyzing entropy, volatility, and behavioral instability across Ethereum networks. Applied DBSCAN and HDBSCAN to longitudinal data to identify sanctions enrichment risks and emergent laundering behaviors.

Smart Contract Honeypot Study (MSCS Project)

Designed experimental frameworks to analyze adversary response patterns, cohort transitions, and adaptive behaviors in adversarial Ethereum honeypot environments, modeling exploit strategies and countermeasure design.

TECHNICAL SKILLS

- Languages: Python, SQL, R
- ML & Data Science: scikit-learn, NumPy, XGBoost, LightGBM, NLP pipelines, regression, clustering, transformer fine-tuning
- Cloud & Infrastructure: AWS (SageMaker, Lambda, ECS, Redshift), GCP, Docker, Kubernetes
- Data Engineering: dbt, Airflow, ETL pipelines, CI/CD
- Databases: Postgres, MySQL, BigQuery, MongoDB, ElasticSearch
- Tools: Git, Lightdash, Tableau, MLflow

EDUCATION

M.S. Computer Science (Cybersecurity Engineering Track) – University of Wisconsin Whitewater (Expected Dec 2025)

M.S. Applied Statistics – DePaul University

B.A. Economics – University of Wisconsin Whitewater

KEY QUALIFICATIONS

- 10+ years building data-intensive solutions from prototype to production
- Deep expertise in statistical modeling, NLP, and blockchain analytics
- Proven ability to collaborate with business stakeholders to define requirements and deliver impactful models
- Experienced deploying and monitoring ML pipelines in cloud environments
- Strong research background integrating behavioral modeling with operational systems