J. Kristopher Andre

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Professional Summary

Data Scientist with expertise in environmental data analysis, ETL pipeline development, and machine learning. Creator of RiskSentry ML achieving 95% accuracy in fraud detection and OneStone Avian Fatality Tracker processing 5,461+ data points. Strong background in pattern recognition and statistical analysis, with experience in both environmental and financial data processing.

Core Competencies

- **Machine Learning:** Pattern Detection, Feature Engineering, Risk Assessment, Model Training
- **Data Processing:** ETL Pipelines, Data Cleaning, Time Series Analysis
- **Technologies:** Python, scikit-learn, D3.js, Firebase, Flask
- **Visualization:** Interactive Dashboards, Geospatial Mapping, Real-time Data Updates

Professional Experience

Environmental Data Scientist *2024 – Present*
Independent Projects

- Processed and analyzed 35,000+ environmental data points across multiple platforms
- Developed automated ETL pipelines integrating multiple research databases
- Created taxonomic classification and data validation systems
- Built real-time monitoring dashboards with interactive visualizations
- Implemented geofencing and boundary detection systems
- Reduced data processing time by 60% through optimization

Digital Business Analytics *2020 – Present*
Self-Employed

- Developed Excel-based analysis system reducing operational overhead by 85%
- Analyzed 5,769+ transactions for pattern recognition and trend analysis
- Implemented data-driven strategies achieving 30% year-over-year growth
- Created comprehensive dashboards for real-time metric tracking
- Processed data from 1,280+ customers for retention analysis

Technical Projects

RiskSentry ML — *Machine learning-based fraud detection system*

- Developed ML-based risk assessment system achieving 95% accuracy in pattern detection
- Engineered 30+ features for transaction risk analysis
- Created synthetic data generation system for 50,000+ training samples

- Built real-time monitoring system with <100ms API response time
- Implemented automated model retraining pipeline with performance monitoring

OneStone Avian Fatality Tracker — *GIS platform for bird collision monitoring*

- Developed GIS platform managing 5,461+ verified data points
- Created automated ETL pipeline for multiple data sources
- Implemented custom marker clustering and visualization system
- Built comprehensive data validation and verification system

Fairfax County Urban Biodiversity Dashboard — *Environmental monitoring system*

- Developed automated species data processing system
- Implemented taxonomic classification and validation
- Created temporal-spatial pattern analysis tools
- Built real-time monitoring and analytics platform

PPalytics — *Privacy-focused financial analytics platform*

- Developed automated transaction processing and analysis platform
- Created comprehensive financial metrics dashboard
- Implemented pattern recognition for recurring transactions
- Built automated reporting system with multiple export formats

Technical Skills

- **Programming:** Python, JavaScript, HTML/CSS
- **Machine Learning:** scikit-learn, Feature Engineering, Pattern Detection
- **Data Engineering:** ETL Design, Pipeline Development, Data Validation
- **Cloud/DevOps:** Git, Flask, Firebase, CI/CD
- **Visualization:** D3.js, Chart.js, Leaflet.js

Research Experience

Research Data Scientist *2021 – 2023*
George Mason University

- Designed and implemented analysis system for 4,000+ specimens
- Developed standardized data collection and validation protocols
- Conducted statistical analysis of ecological patterns
- Created automated data processing and validation pipelines

Education

Bachelor of Science in Biology *2018 – 2022*
George Mason University

- Focus: Quantitative Analysis and Statistical Methods
- Advanced Coursework: Machine Learning, Data Analysis, Research Methodology
- Research: Data-Driven Ecological Pattern Analysis