

# Kenneth Sherrod

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## Education

### Master of Science, Data Science and Analytics

January 2025 - December 2026

Old Dominion University

### Bachelor of Science, Computer Science

January 2022 - December 2024

Old Dominion University

- Association of Computing Machinery, Tau Sigma Honor Society, Dean's List Recipient (Spring 2022 & 2024)

## Experience

### City of Virginia Beach Department of Information Technology

May 2025 - August 2025

#### Data Science Intern

Virginia Beach, Va

- Designed and implemented a real-time environmental data analytics pipeline using Python and the Breeze Technologies API, ingesting and processing 1.2M+ multivariate time-series sensor records across multiple Virginia Beach monitoring locations.
- Performed exploratory and time-series analysis to identify air quality trends, anomalies, and high-risk conditions, supporting environmental monitoring, early flood detection, and emergency preparedness initiatives.
- Produced weekly analytical reports and presentations, translating complex technical findings into actionable insights for city leadership and operational teams.

### Mag Aerospace

June 2023 - August 2023

#### Software Engineering Intern

Fort Belvoir, Va

- Contributed to defense imaging and simulation pipelines by capturing and processing high-fidelity infrared and multi-camera datasets used to train 3D virtual reality combat systems.
- Operated and coordinated multi-system imaging stations, ensuring accurate synchronization, data integrity, and repeatable capture workflows across controlled test environments.
- Supported end-to-end data workflows from image acquisition, preprocessing, and handoff to engineering teams, improving dataset usability for immersive training applications.

## Projects

### Strava Performance Analytics and Retention Modeling

- Built an end-to-end analytics pipeline using Python and SQL to ingest athlete activity data from the Strava REST API.
- Designed a normalized PostgreSQL schema to store high-volume JSON API responses and support efficient analytical queries.
- Developed analytical reports and dashboards to surface performance trends and insights for data-driven recommendations.

### Heart Disease Prediction System

- Deployed a machine learning pipeline to predict heart disease risk, integrating a responsive frontend UI with AI-powered backend inference services.
- Trained and compared XGBoost, SVM, and KNN classifiers, implementing systematic model selection based on accuracy, precision, recall, and generalization performance.
- Built a FastAPI backend serving real-time predictions via a RESTful JSON API, with integrated data preprocessing and feature scaling.

### Safety & Emergency Response Mobile Application

- Built a discreet Android safety application in Java that provides emergency support while masquerading as a standard coupon app.
- Built AI-driven audio classification using TensorFlow Lite to detect distress-related sounds, and integrated Porcupine for hands-free activation via wake words and spoken keywords.
- Developed a Django backend with SQLite for lightweight, reliable data persistence and API communication.

## Skills

Programming & Web: Java, JavaScript, C++, Python, SQL, HTML, CSS

Databases & Data Tools: MySQL, PostgreSQL, MongoDB, Databricks, Jupyter, Excel, Tableau, Power BI

Frameworks & Libraries: Django, Node.js, React.js

DevOps & Methodologies: Git, GitHub, Linux, Agile, Scrum