

Lance Penaflor

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EDUCATION

University of West Florida

Bachelor of Science in Computer Science; Minor in Statistics; Certificate in Data Science

Pensacola, FL

May 2027

EXPERIENCE

Data Systems Engineer Intern Andrews Institute

Sep. 2025 – May. 2026

- Engineered R applications for athlete performance and injury analytics, transforming raw data into interactive dashboards and data storytelling visuals for coaches and medical staff.
- Built Power BI dashboards summarizing athlete statistics, recovery trends, and performance metrics from SQL databases, supporting cross-platform analytics and performance tracking.
- Designed optimized SQL schema in Azure SQL to ensure scalability and real-time reporting.
- Streamlined automated data pipelines for real-time data collection and visualization, reducing manual entry time and enabling consistent analytics across platforms.
- Implemented role-based access controls to protect sensitive athlete data, maintaining full HIPAA compliance while improving data accessibility for analysis.

Undergraduate Teaching Assistant University of West Florida

Jan. 2025 – Jun. 2025

- Supported 120+ students in C++ Algorithms and Statistics courses, strengthening their understanding of analytical thinking and problem-solving.
- Introduced Python-based labs and visualization exercises, replacing calculator workflows to align coursework with modern data analytics practices.
- Co-produced accessible, interactive course materials with full compliance to university disability and accessibility mandates.

Machine Learning & Data Analytics Research Assistant UWF CSDA Lab

Oct. 2024 – Oct. 2025

- Implemented Python data pipeline for large-scale mass spectrometry datasets (10,000+ samples) using Pandas, scikit-learn, NumPy, and Matplotlib, achieving 75% accuracy and 80% specificity.
- Processed and analyzed complex, high-dimensional data, demonstrating ability to digest and structure large datasets for statistical modeling and performance analytics.
- Reduced data dimensionality by 99.8% with wavelet transforms and PCA for computational efficiency.
- Delivered data storytelling reports and visualizations summarizing model metrics (accuracy, precision, recall, F1) to guide research decisions and algorithm selection.

Data Science Educator UWF CSDA Lab

Aug. 2024 – Present

- Founded a 35+ member Python and Data Science learning community, mentoring peers in analytics, visualization, and communication.
- Created 10+ interactive Jupyter notebooks covering Python, statistics, and machine learning concepts for beginner audiences.
- Led weekly workshops on data visualization and storytelling using Python, improving engagement.

PROJECTS

Music & Fashion Analysis (In Progress) | Python, Pandas, Scikit-learn, ETL

- Built ETL pipeline on 3 Kaggle datasets, cleaning duplicates, removing nulls, and filtering using Pandas.
- Feature engineering by integrated LastFM API to enrich Spotify data with genre tags for all unique songs.
- Performed Exploratory Data Analysis on data using matplotlib to spot trends and gain insight on data.

Data Science Learning Website | React, Node.js, TypeScript, Express

- Deployed browser-based coding + AI tutor platform with 50+ users using React and Express.
- Directed a 3-person full-stack team to deploy and maintain a browser-based platform using React/Express, implementing CI/CD via Vercel/GitHub for stability.

TECHNICAL SKILLS

Programming: Python, SQL, R, C++, JavaScript, TypeScript, Java

Data Tools: NumPy, Pandas (ETL, EDA), Scikit-learn, PyTorch, TensorFlow, Matplotlib, R Shiny, Power BI

Analytics Concepts: Data Storytelling, Performance Tracking, Machine Learning, Statistics, Visualization

Web & Systems: React, Node.js, Express, Docker, Git, Agile Development, REST API, Azure SQL, MySQL