

Tyaha Woodard

Information Systems Graduate Student

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EDUCATION

Master of Science in Information Systems

Nova Southeastern University

01/2025 – Present
Fort Lauderdale, FL

- Concentration: Artificial Intelligence Application, Data Analytics
- GPA: 4.0 | Expected Graduation: May 2027
- Relevant Coursework: Foundations of Programming, Data Structures and Algorithms; Data Analytics and Artificial Intelligence; Database Systems

Bachelor of Science in Civil Engineering

Western Kentucky University

08/2019 – 05/2023
Bowling Green, KY

Relevant Coursework: Architectural Drafting, Geographic Information Systems

PROJECTS

Healthcare Data Analytics Project (Externship), TruBridge

04/2026 – 06/2026

Top Performer Recognition

- Conducted **exploratory data analysis (EDA)** on county level **CDC PLACES** public health data using **Python (Google Colab)** to identify relationships between diabetes prevalence, healthcare access, and geographic disparities.
- Created **Tableau** visualizations and a **Gamma** presentation to communicate county level healthcare insights to non-technical audiences.
- Developed an interactive **Claude Artifacts** dashboard by integrating research findings, healthcare datasets, and interactive visualizations.
- Leveraged **ChatGPT**, **Claude**, and **prompt engineering** to streamline research, technical writing, dashboard development, and analytical workflows.

Deep Learning for NLP (Sentiment Analysis & Text Generation)

- Developed a **Bidirectional LSTM model** using **TensorFlow/Keras** for **sentiment analysis** on the IMDB dataset, achieving over **85%+ validation accuracy**.
- Evaluated model performance using **precision, recall, F1-score** and **ROC-AUC**, to assess predictive accuracy.
- Fine-tuned a **pre-trained GPT-2 model** using **Hugging Face Transformers** to generate **synthetic text data**, applying **tokenization** and **sequence padding** for preprocessing.
- Generated and analyzed **100+ synthetic data points** to assess sentiment predictions and model output quality.
- Visualized model performance and probability distributions using **Python (Matplotlib)** to support **data driven insights**.

Convolutional Neural Network for Image Classification (CIFAR-10)

- Developed and trained a **CNN** using **Python** and **TensorFlow/Keras** to classify images across 10 categories in the CIFAR-10 dataset.
- Achieved over **87%+ validation accuracy** through model optimization techniques including **Batch Normalization** and **Dropout**.
- Evaluated model performance using **classification metrics** such as precision, recall, and F1-score, and Analyzed misclassified images to interpret prediction errors and improve understanding of model behavior.
- Visualized training and validation using **Matplotlib** to assess overfitting and model generalization.

Movie Streaming Database System (MySQL)

- Designed and implemented a **relational database system** using **MySQL** to manage streaming platform data (movies, users, subscriptions, watchlists, etc).
- Developed a normalized schema from an **Entity Relationship (ER) model** supporting one-to-many and many-to-many relationships.

- Wrote and executed complex **SQL queries** (multi-table joins, aggregate functions, subqueries, GROUP BY, HAVING) to analyze user and content data.
- Built and validated the database with **structured sample data**, ensuring data integrity through constraints and key relationships.

Conditional Generative Adversarial Network (CGAN) - Image Generation (Fashion MNIST)

- Developed a **CGAN** using **Python**, **TensorFlow**, and **Keras** to generate synthetic images of clothing items from the Fashion MNIST dataset.
- Designed and implemented both **generator** and **discriminator** models to learn and replicate image distributions across labeled classes.
- Preprocessed image data using **normalization** and **one-hot encoding** to prepare inputs for model training.
- Evaluated model performance and visualized generated outputs using **Matplotlib** to assess image quality and training progress.

PROFESSIONAL EXPERIENCE

AI Trainer/Reviewer - Software Engineering/Coding Domain

06/2026 – Present
Remote

Handshake AI Fellowship

- Evaluated **AI generated responses** for **software engineering** and **coding tasks** using structured **evaluation rubrics**.
- Authored detailed **rationales** and **comparative assessments** to improve **AI reasoning, communication, and response quality**.
- Passed **calibration assessments** and served as both a **task contributor** and **reviewer**, ensuring scoring consistency and quality.

Research Assistant

01/2022 – 05/2023
Bowling Green, KY

Transportation Engineering Research Lab

- Analyzed and labeled thousands of driver behavior records in **Excel**, classifying scenarios such as distracted driving, DUI related impairment, and non-distraction cases.
- Applied a structured **data classification system** (phone use, texting, alcohol, drugs, etc.) and performed **data validation**, collaborating with team members to resolve ambiguous cases.
- Cleaned and organized large datasets, identifying **outliers** and improving **data quality** for analysis.
- Conducted a simulated driving study (~50 participants), collecting and analyzing data on reaction time, attention, and distraction patterns across conditions (day and night).
- Transformed raw simulator data into structured datasets and created **tables and visualizations in Excel** to communicate insights and support research findings.

KEY SKILLS

Technical

Python, Tableau, Power BI, SQL (MySQL), TensorFlow, Keras, NumPy, Matplotlib, Google Colab, HTML, CSS, Javascript, GIS, AutoCAD

Professional

Adaptability, Project Management, Analytical Thinking, Team Collaboration, Attention to Detail, Research and technical writing, Data Storytelling

Data, Database and AI

Exploratory Data Analysis (EDA), Data Analysis, Data Visualization, Data Cleaning, Data Preprocessing, Prompt Engineering, Machine Learning (coursework), ER Modeling, Relational Algebra, Database Schema Design, Query Optimization, Model training and evaluation, Data Preprocessing, Convolutional Neural Networks (CNNs), Generative Adversarial Networks (GANs), Generative AI (GPT-2)