JEAN-EMMANUEL KOUADIO

DATA SCIENCE INTERN

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EDUCATION

Shepherd University — Jan 2022 - Dec 2024
Master of Science in Data Analytics & Information Systems — Shepherdstown, WV

Shepherd University — Aug 2017 – Dec 2021
Bachelor of Science in Computer Engineering — Shepherdstown, WV

WORK EXPERIENCE

Shepherd University Wellness Center — Sep 2022 - Present
Sales Manager — Shepherdstown, WV

- Implement data-driven strategies to analyze customer trends, improving department sales by 15%.
- Collaborate with the team to optimize inventory based on predictive analytics.

West Virginia INBRE — Dec 2018 - Jul 2021
Research Assistant — Shepherdstown, WV

- Led impulsive ODE model analysis for metastatic lung cancer; improved treatment prediction accuracy by 30%.
- Conducted data analysis, yielding significant insights for immunotherapy and radiation therapy protocols.
- Presented findings at WVAS Conferences to an audience of 200+ professionals.

PROJECTS

Advanced SMS Spam Filter [Link] (Python, NLTK, Scikit-learn)

- Developed a Natural Language Processing (NLP) model using NLTK for classifying SMS into spam and ham, achieving an accuracy of 97%.
- Conducted extensive data processing, including text cleaning and feature engineering with TF-IDF, max features set to 5000.
- Applied Naïve Bayes classifier, optimizing through hyperparameter tuning with a final model accuracy of 98%.

Facial Emotion Recognition System [Link] (Python, Git)

- Develop an AI system to accurately discern user emotions, enhancing digital marketing and mental health tools.
- Processed a dataset of over 25,000 images, applying data augmentation and preprocessing to boost model efficacy.
- Trained a CNN model and a VGG16 model, employing transfer learning techniques for initial benchmarking.
- The VGG16 model accuracy score was very low (i.e., < 45%) so I fine-tuned the model which improved the model accuracy with a score of about 60%.
- Achieved comparable performance with the CNN model and successfully tested both models on new, unseen images.

Cancer Diagnosis Web Application [Link] (Python, Flask, AWS)

- Developed a machine learning-powered web application enabling physicians to diagnose cancer types with 97% accuracy.
- Analyzed and processed a healthcare dataset of 500+ instances and 30 features and built the model using Logistic Regression.
- Engineered a user-friendly interface with Flask and deployed the application on AWS EC2.

SKILLS

Programming Languages & Markup: Python, R, SQL, JavaScript, HTML, CSS
Libraries: Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, NLTK, TensorFlow, Keras
Tools: Tableau, Excel, Jupyter, Flask, AWS EC2, and Git.
Data Science & Machine Learning: Regression, Classification, Clustering, Data Visualization, NLP, CNN, ANN, Data Mining, OpenCV, A/B Testing, Predictive Modeling
Soft Skills: Communication, Teamwork, Problem-Solving, Research