# 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
- Implemented data-driven strategies to analyze customer trends, improving department sales by 15%.
- Collaborated 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 96.86%.
- 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 98.03%.

**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