

Professional Experience

PlentiFarms - Data Science Engineer March 2023 – Present

Knowledgeable in avenues of Data Science. I have 2.5 years of experience in preparing and preprocessing data, deriving useful insights from data for Machine Learning model. Skilled in designing and building microservices architecture with a strong foundation in Python and Flask, I excel in creating scalable and efficient data solutions (ETL).

Technical Skills

Languages and Data Bases: Python, PostgreSQL, MySQL
Tools: Amazon Web Services, Docker, Power BI, Jenkins, Selenium, Postman, Git hub, GitHub Actions, Jira.
Skills: Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, CI/CD, Hugging Face, NumPy, Pandas, TensorFlow, Scikit-learn, Matplotlib, NLTK, Spacy, Pytesseract, OpenCV, Flask, Data Analytics, Data Visualization, AWS, Postman, Web Scrapping.

Professional Projects

PlentiFarms - Disease Detection June 2023 – April 2024

- TensorFlow used to build a Plant Disease Detection model to identify whether plants are healthy or have deficiencies and provide appropriate treatments based on the results.
- Leveraged TensorFlow's capabilities for building, training, and deploying deep learning models, ensuring an effective solution for plant health analysis.
- Leveraged Amazon S3 for model artifact storage, Amazon ECR for containerized Docker image and API gateway to expose the deployed Lambda function, enabling real-time predictions for mobile applications built in Flutter.

PlentiFarms - Grading of Harvested Crops March 2024 – Dec 2024

- Developed an instance segmentation model using YOLOv8 to grade crop grains quality in real-time video streams, identifying key quality factors of grades.
- Utilized YOLOv8 for accurate detection and classification of crop grains based on their quality, such as identifying defective grains, disease symptoms, or inconsistencies in shape.
- Dockerize the YOLOv8 model, ensuring compatibility and encapsulation of the deep learning environment, making it easy to deploy the video grading solution.

Experience

- AWS Elastic Compute Cloud EC2, SageMaker, Notebook instance, Simple Storage Services S3, Deployment.
- Developed a voice AI application integrating text-to-speech (TTS) APIs for real-time interactions.
- LLM Fine-Tuning: Experience fine-tuning Transformer-based models (GPT, BERT, T5) for domain-specific tasks.
- Implemented automated CI/CD pipelines using Jenkins, Docker and AWS DevOps, reducing deployment time by 30%.
- Managed large-scale data processing tasks, ensuring data integrity and preparing datasets for machine learning models and further analysis.
- Automated the Crop Calendar Activity to analyze data tables and provide actionable insights for farmers.
- Designed an RPA solution using Selenium to automate crop price monitoring, improving market insights.
- Integrated soil nutrient analysis from testing devices to recommend suitable crops or suggest nutrient management for current crops.
- Experience with Random Forest, Gradient Boosting, XGBoost, SVM, K-Means, KNN and NLP frameworks BOW, TF-IDF, RNN, LSTM, GRU.

Education

Nagpur University	July 2017 – Aug 2021
Bachelor of Engineering	Nagpur, MH
Maharashtra Directorate	June 2018 – Nov 2021
National Cadet corps (NAVAL WING C – Cert)	Nagpur, MH
Certificate : The Complete Neural Networks Bootcamp: Theory, Applications	