LALIT KUMAR HARODE

Data Scientist /AI ML Engineer

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Professional Summary:

- In my professional IT experience of more than 3 years as a permanent employee in my company, I have worked on distinguished projects.
- I completed multiple machine learning, deep learning, and generative AI projects and deployed them on the AWS platform.
- Strong problem-solving, critical thinking, and communication skills.
- Cross-functional teamwork in my company where dependencies are at peak, so accomplish the task while maintaining a positive overall atmosphere.

Technical Skills:

➢ **Language**	**Python**
➢ **Data visualization**	Matplotlib, Seaborn
➢ **Database Management**	SQL, MongoDB
➢ **Data manipulation**	NumPy, Pandas
➢ **Machine Learning**	sci-kit-learn, SciPy,
➢ **Deep learning**	TensorFlow**,** Keras,
➢ **Text Processing**	nltk, spacy
➢ **Web Scraping**	Requests, Beautiful Soup, Selenium
➢ **CI CD Pipeline**	Python, Github Action
➢ **Machine learning operation**	Mlflow , Dagshub , DVC
➢ **Code version control**	Git, Github
➢ **Generative AI**	Huggingfacehub, LangChain, RAG , LLM
➢ **MLOps**	AWS (Beanstalk, CodePipeline),
	AWS- Docker (Image creation, ECR, EC2)

Work Experience:

The CloudNexus-AI ML Engineer.

May 2024 to present

- **Project: Property Finder & Price Prediction Platform,** Worked to Develop a comprehensive platform for India's leading online workspace provider that allows users to easily get office workspace. I worked to build a model to predict the price of a property. Our platform allows users to provide relevant information like location, and requirements and based on this, users can search property prices, and also they can search all details of the same on the same platform.
- using ML algorithms, we made this easier and more functional. implemented a user-friendly interface for property searches based on various criteria.
- **Project: Text summarization, Question and Answering Building,** I worked to develop an end-to-end pipeline based on a generative AI to summarise text and return to summarize context. And another one is like to upload a pdf file and get the question and answer from this.
- **Roles and Responsibilities,** Scrap the data from websites and store it into the database using python, Beautiful Soup, Selenium. And train a machine and deep learning models, made a CICD Pipeline through Github action and deploy on a AWS with the help of Docker image.

ITE Infotech Pvt Ltd -Junior Data Scientist.

June 2021- May 2024

- **Project: provide intelligent skincare product recommendations,** build an ML model using feature engineering, and recommend the system to recommend the best skin care product based on skin type. And deployed on AWS with the help of docker image, EC2,ECR repository. Which increased the client revenue by 30 percent.
- **Project: Pothole counter, YOLOv5 for Pothole and Crack Detection: Project Summary**
- This project focuses on detecting and counting potholes and road cracks using the YOLOv5 object detection framework. The workflow began with **data collection**, where a custom dataset of road images with visible potholes and cracks was curated from open sources and manual collection. The images were annotated using tools like **LabelImg** to generate bounding box labels for cracks and potholes.
- The YOLOv5 model was fine-tuned on the annotated dataset by modifying the configuration file to accommodate the specific classes (potholes and cracks). The model training involved preprocessing the images, resizing them to the required dimensions, and splitting the dataset into training and validation sets. Training was carried out using pre-trained weights on a GPU for faster convergence.

- Post-training, the model was tested on unseen road images and video feeds to validate its detection accuracy. The detections were processed to count the number of potholes and cracks in each image or frame.
- The model was deployed using a Flask-based API, enabling real-time defect detection from uploaded images or video streams. For visualization, a dashboard was created to display defect counts and marked images/videos, helping authorities prioritize road repairs effectively. This project emphasizes safety and proactive road maintenance through AI-driven insights.

- **Roles and Responsibilities,** Image AnnotationModel training and testing using Machine learning, deep learning by utilizing keras, TensorFlow. And Deployment on AWS with the help of Docker image, EC2, and ECR repository.

Education:

B.E.(CE) -RGPV University

~ Bansal College of Engineering, Mandideep Bhopal (July 2018)

Higher Sec. School(12th)

~ New Betul H.S School Betul MP (2014)

Senior Sec. School(10th)

~ Govt School Betul MP (2012)

Hobbies:

Sports, Music, implement new technologies into agriculture.