SHUBHRANSHU

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OBJECTIVE

To leverage my machine learning expertise to develop innovative solutions and drive business growth. Proficient in Python and ML libraries for model development and deployment.

EDUCATION

Bachelors of Technology	United College of Engineering and Research, Prayagraj (CSE)	Expected 2025
Intermediate (10+2)	MPVM Ganga Gurukulam (CBSE)	2021
High School	MPVM Ganga Gurukulam (CBSE)	2019

PROJECTS

U-Net architecture to accurately segment polyp within colonoscopy images June 2024 - July 2024

- Utilised Python and libraries (TensorFlow, Keras, NumPy, Pandas, Glob, TQDM) with Jupyter Notebook to implement a U-Net architecture for polyp image segmentation, leveraging convolutional layers, max pooling, upsampling, and concatenation.
- Collected and pre-processed images and segmentation masks, performing resizing, normalisation, and data augmentation; split the data set into training, validation, and testing sets to optimise model performance.
- Designed and trained a U-Net-based polyp segmentation model, achieving a precision of 95.20% and an accuracy of 81.50%, validated through robust evaluation metrics.
- Delivered clear insights via segmentation result visualisations, demonstrating effective model performance in identifying polyps with high accuracy.

Convolutional Neural Network (CNN) to classify handwritten digits June 2024 - June 2024

- Leveraged Python (TensorFlow, Keras, NumPy, Matplotlib, Pillow) and Kaggle Notebook to build a CNN with Adadelta optimizer for MNIST digit classification.
- Preprocessed images by reshaping, normalising pixel values, and converting class vectors to binary; designed a sequential model with convolutional, MaxPooling, dropout, flatten, and dense layers.
- Trained the model over 10 epochs, achieving 99.41% accuracy and 1.85% loss on training data, with 0.9895 accuracy and 0.0414 loss on validation, using categorical cross-entropy.
- Attained high accuracy in digit classification, showcasing CNN effectiveness and potential for OCR applications.

Text-Based Sentiment Analysis for Amazon Food Reviews June 2022 - June 2024

- Developed a machine learning model using Python (Pandas, NumPy, Matplotlib, NLTK, VADER) in Kaggle Notebook to classify Amazon food reviews as positive, neutral, or negative.
- Preprocessed text data with NLTK, applied feature extraction, and used VADER for sentiment analysis, categorising reviews into 'Positive,' 'Neutral,' and 'Negative' classes.
- Visualised sentiment score distributions with bar plots (e.g., positive scores peaking at 0.7, neutral at 0.4, negative at 0.8), providing clear insights into customer sentiment trends.
- Delivered accuracy metrics, enabling businesses to gain actionable insights for improving products, services, and customer experience.

SKILLS

Tech Stack	Python, TensorFlow, Keras, NumPy, Pandas, Matplotlib, NLTK, VADER, Glob, TQDM, Pillow.
Machine Learning	Convolutional Neural Networks (CNN), U-Net Architecture, Sentiment Analysis, Model Training.
Wrangling & Analysis	Image Preprocessing, Text Preprocessing, Feature Extraction, Data Visualization (Bar Plots).
Tools	Jupyter Notebook, Kaggle Notebook.

CERTIFICATIONS

- Certificate of Internship – MNNIT Allahabad, Dept. of Computer Science & Engineering Jul 2024
- Using Beam ML to Catch Toxicity in Gaming – Google Cloud project via Coursera Nov 2023
- Oracle Cloud Infrastructure 2023 Certified Foundations Associate – Oracle Corporation Sep 2023