Harikesh Kushwaha

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MACHINE LEARNING ENGINEER

As a recent graduate with a strong foundation in **statistics** and machine learning algorithms, I have worked on several personal projects including **sentiment analysis**, **natural language processing**, and **computer vision**. In my recent projects, I have showcased my skills in **data cleaning**, **feature engineering**, and **model selection**. I have also demonstrated my proficiency in tools like **Python**, **TensorFlow**, **Keras**, **scikit-learn**, and **pandas**. With a passion for solving complex problems and a drive to constantly learn and improve, I am excited to take on new challenges in the field of Data Science.

TECHNICAL SKILLS

Languages : Python, SQL, JavaScript, MATLAB, C++

Frameworks : TensorFlow, Keras, Scikit-learn, Django, Streamlit

Libraries : matplotlib, pandas, NumPy, Seaborn, BeautifulSoup, Selenium, OpenCV, Statsmodels

Databases : MySQL, MongoDB

Dev Tools : VS Code, Git, GitHub, Jupyter Notebook, Anaconda, AWS, Kaggle, S3

Soft Skills : Analytical and problem-solving skills, Teamwork, Attention to detail, Communication skills

PROJECTS

Food Vision Python, TensorFlow, Colab, Image Processing, Streamlit, Transfer Learning Source Code

- Developed a deep neural network using TensorFlow and Keras to classify 101 categories of food.
- Used a pretrained **EfficientNet** model to extract features from the food images, and then **fine-tuned** the model to improve its accuracy.
- Achieved an accuracy of 80% on the test set, demonstrating the effectiveness of the approach in addressing complex image recognition problems.

NLP With Disaster Tweets Python, TensorFlow, NLP, Text Vectorization, Transfer Learning Source Code

- Developed Natural Language Processing models to classify disaster and non-disaster tweets using text vectorization, word embeddings, and deep learning models including LSTM, GRU, and 1D CNNs
- Utilized the Universal Sentence Encoder to create embeddings on both the character and word levels, and implemented a multivariate model using the functional API of TensorFlow.

House Prices Prediction

Python, pandas, scikit-learn, kaggle, Matplotlib, Seaborn

Source Code

Location: New Delhi, Delhi

- Analyzed over 80 features to predict house prices using machine learning.
- Performed Exploratory Data Analysis and feature engineering to get insight from data.
- Trained multiple models using scikit-learn and selected the best one by applying grid search and cross-validation. Best regression model achieved a top 12% ranking on the Kaggle leaderboard.

Digit Recognizer

Python, TensorFlow, Keras, Kaggle

Source Code

• Developed a very deep **convolutional neural network** using TensorFlow with **dropout** and **batch normalization** to improve performance achieving a test accuracy of **99.48**%

EDUCATION

Indian Institute of Technology Delhi

Master of Science in Physics, (8.6 GPA)

New Delhi, India July 2021 – May 2023 (Expected)

Banaras Hindu University

Bachelor of Science in Physics, (8.2 GPA)

Varanasi, Uttar Pradesh India July 2018 – May 20231

CERTIFICATIONS

- Deep Learning Specialization (DeepLearning.AI) Certificate
- Machine Learning Specialization (DeepLearning.AI) Certificate
- TensorFlow Developer Certificate in 2022: Zero to Mastery (Udemy) Certificate