Akash Thiruveedula

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SUMMARY

AI and Data Science Graduate with expertise in Python programming, data analysis, and machine learning. Proficient in using pandas for data manipulation and visualization. Passionate about leveraging data-driven insights to solve complex problems and drive innovation.

SKILLS

- **Programming:** Python , MySql
- **Data Analysis:** MS Excel , Pandas , Numpy
- **Data Visualization:** Matplotlib , Seaborn ,Tableau
- **Machine Learning:** Scikit- Learn - Regression , Classification , Clustering
- **Advanced Analytics:** CNN Basic , NLP Basic
- **Key Skills:** Data Analysis , EDA , Statistic , Predictive - Model - Building , Data Visualization , Problem Solving , Decision Making

PROJECTS

Car Price Prediction Analysis

Sep 2024 – Oct 2024

Business Objective: Develop a machine learning-based system to predict car prices, providing manufacturers with insights for competitive pricing strategies in the American market.
Approach: Implemented and compared various regression models, including Linear Regression, Ridge, Lasso, ElasticNet, Decision Trees, and Random Forest. The system was fine-tuned using hyperparameter optimization and evaluated on performance metrics like R^2 score, RMSE, and MAPE.

Tools and Techniques Used:

- **Technology:** Machine Learning (Linear Regression, Ridge, Lasso, ElasticNet, Decision Tree, Random Forest)
- **Tools:** Python, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn

Micro organism Classification using Deep Learning, *Final Year Project*

Dec 2023 – May 2024

Business Objective: Develop a deep learning-based system to classify microorganisms into 8 categories, improving accuracy and efficiency for researchers.

Approach: Implemented VGG, LeNet, and a custom manual net for classification. Integrated the system into a web interface with secure login/signup using Django.

Tools and Techniques Used:

- **Technology**: Deep Learning (VGG, LeNet, Custom Neural Net)
- **Tools**: TensorFlow, Keras, Django, MySQL, HTML/CSS
- **Deployment**: Scalable web-based platform

Chess Piece Identification using CNN, *Academic Project*

Jun 2022 – Oct 2022

Business Objective: Identify chess pieces accurately despite variations in lighting and orientation to enhance automated chess game tracking.

Approach: Developed a robust CNN model utilizing pre-trained models and preprocessing techniques for accurate piece recognition. Compared CNN performance to alternative methods for validation and improvement.

Tools and Techniques Used:

- **Technology**: Convolutional Neural Networks (CNN), Transfer Learning
- **Tools**: TensorFlow, Keras, OpenCV

Spam Mail Classification, *Academic Project*

Jul 2022 – Nov 2022

Business Objective: Combat the influx of spam emails by developing a system that accurately distinguishes between spam and legitimate emails.

Approach: Developed a classification system using Naive Bayes and Support Vector Machines (SVM) to identify spam emails. Evaluated performance with metrics such as precision, recall, and F1 score on a diverse email dataset.

Tools and Techniques Used:

- **Technology**: Naive Bayes, SVM, Text Preprocessing
- **Tools**: Python, Scikit-learn, Pandas, NumPy

EDUCATION

B.Tech. Artificial Intelligence and Data Science, *Rajalakshmi Institute of Technology* 2020 – 2024
CGPA : (8.60/10.00) Chennai, India
Relevant Course Work : Artificial Intelligence, Machine Learning, Deep Learning, Data Analytics.

Class XII (CBSE AISSCE), *DAV Senior Secondary School* 2019
Score : 78.80% Chennai, India

Class X (CBSE AISSE), *DAV Senior Secondary School* 2017
CGPA : (9.20/10.00) Chennai, India

COURSES

Python for Data Science, *NPTEL - IIT Madras* Feb 2023

- In-depth understanding and application of Python in data science, focusing on analytics and diverse functionalities.
- Practical use of Pandas, NumPy, and SciPy for data manipulation, exploration, and actionable insights.
- Developed essential machine learning skills in Python, encompassing algorithms, model evaluation, and predictive modelling using scikit-learn.