Sarvajanik College of Engineering and Technology

Department Name: Artificial Intelligence And Data Science

Subject: Project-II Code: BTAI16803

AI/ML Internship

Presented By:
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Supervised By:
Prof. Nitya Komalan

Company Details

- Company name: Hyeon Infotech
- Provided services: Android Application Developement, iOS Application Development, Graphics Designing, and UI/UX Designing.
- Website URL: https://hyeoninfotech.com/
- No. of Employees: 10-15
- Company Address: 1076-1077, Silver Business Point, VIP Cir, Uttran, Surat, Gujarat 394105

Role and Responsibilities in Company

- Position: AI Engineer Intern
- Key Responsibilities: Learn about new technologies and cutting-edge AI tools, then use them to solve issues and complete projects in the real world.

Introduction

- During my internship, I developed both front-end and back-end applications utilising contemporary frameworks, gaining practical expertise in AI, machine learning, and web development.
- used Python tools like NumPy, Pandas, and TensorFlow to investigate important AI ideas including natural language processing, computer vision, and deep learning.
- used abilities in data preprocessing, model training, and evaluation to work on real-world projects involving categorisation, predictive modelling, and AI-driven online applications.
- The knowledge gained will serve as a strong foundation for future LLM and AI Agent projects.

Motivation

- **Practical Experience:** To improve my coding and problem-solving abilities, apply theory to actual tasks.Discuss identified limitations of existing work/methods.
- **Exposure to the Industry:** Work with professionals to discover cutting-edge AI trends and best practices.
- **Career Development:** For a prosperous tech career, have a solid network and portfolio.
- **Research & Innovation:** Take part in creative initiatives and test out state-of-the-art AI.

Technologies Learned

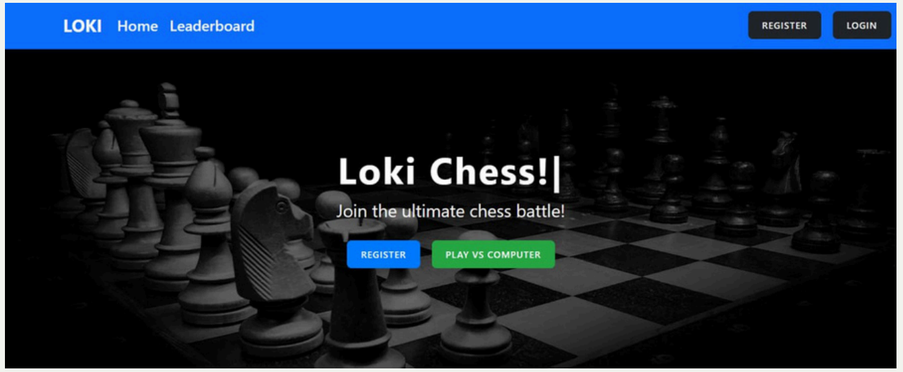
- Web Development: React.js (Frontend development)
- Python Libraries: NumPy, Pandas, TensorFlow, PyTorch, Scikit-learn, NLTK
- Machine Learning & AI: Deep Learning, NLP, Computer Vision
- Data Visualization: Matplotlib, Seaborn

Projects

1.Personal Portfolio Website:

- Objective: Showcase skills, projects, and experience in AI, web development, and data science.
- Tech Stack: Built with HTML, CSS, and JavaScript, featuring smooth scrolling and modern UI.
- Key Sections: Includes About Me, Projects, Skills, and Contact for professional networking.
- Outcome: A professional and interactive portfolio highlighting expertise in AI and development.

Projects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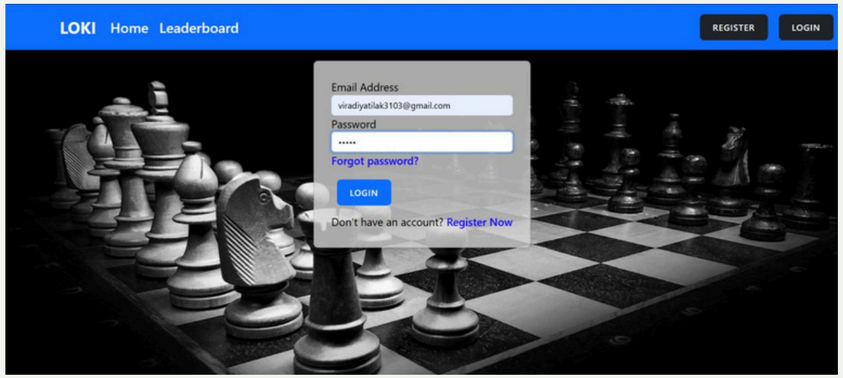
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REGISTER
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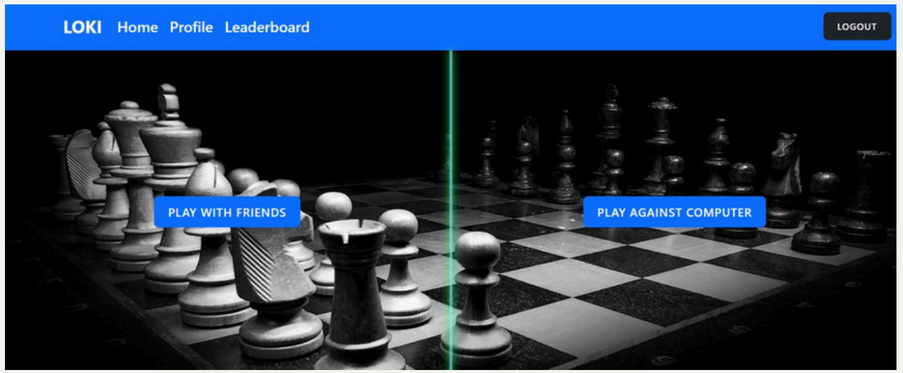
Email Address
viradiyatilak3103@gmail.com
Password
Forgot password?
LOGIN
Don't have an account? Register Now


LOKI Home Profile Leaderboard
LOGOUT
PLAY WITH FRIENDS
PLAY AGAINST COMPUTER

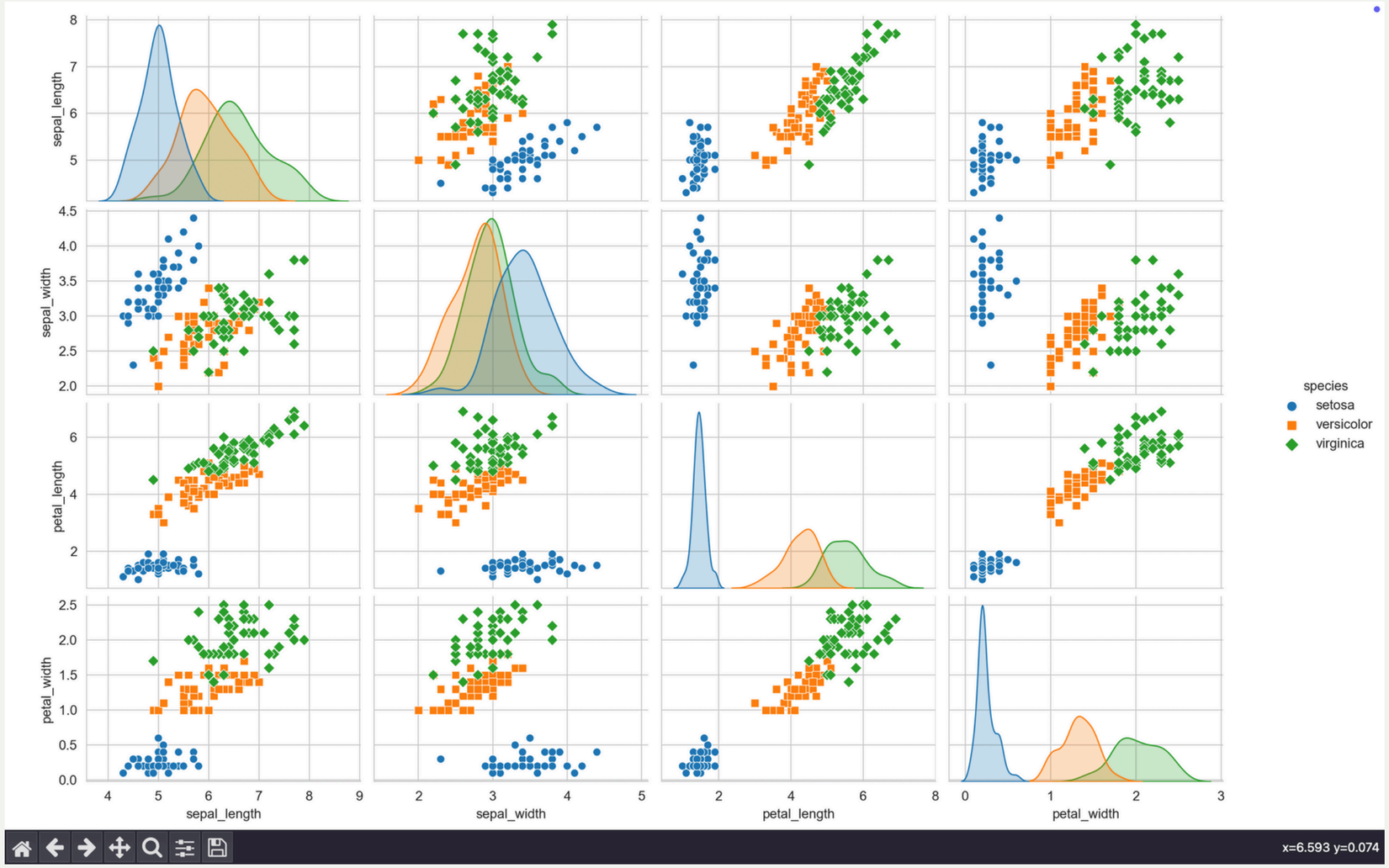

LOKI Home Profile Leaderboard
LOGOUT
Turn
white
Your Color
white
Status
Ongoing
Computer
Rating: Unknown
Moves

Projects

Data Visualization Project:

- **Objective:** Analyze and visualize the Iris dataset to explore relationships between features.
- **Tech Stack:** Python, Pandas, Matplotlib, and Seaborn for data visualization.
- **Key Visuals:** Pairplot, correlation heatmap, box plot, and histogram to uncover patterns.
- **Outcome:** A clear and interactive representation of data insights through visual analysis.

Projects


sepal_length
sepal_width
petal_length
petal_width
species
setosa
versicolor
virginica
x=6.593 y=0.074

Projects

Youtube comments sentiment analysis:

- **Overview: Extracts:** YouTube comments using API, Analyzes sentiment (Positive, Neutral, Negative), Uses NLP for text processing
- **Technologies Used:** Python (NLTK, TextBlob, VADER), YouTube Data AP, Streamlit for UI, Pandas & Matplotlib for data visualization
- **Key Features:** Fetch & analyze comments, Real-time sentiment classification, Graphical insights (charts, word cloud), Simple and interactive interface

Projects

📊 YouTube Comment Sentiment Analysis

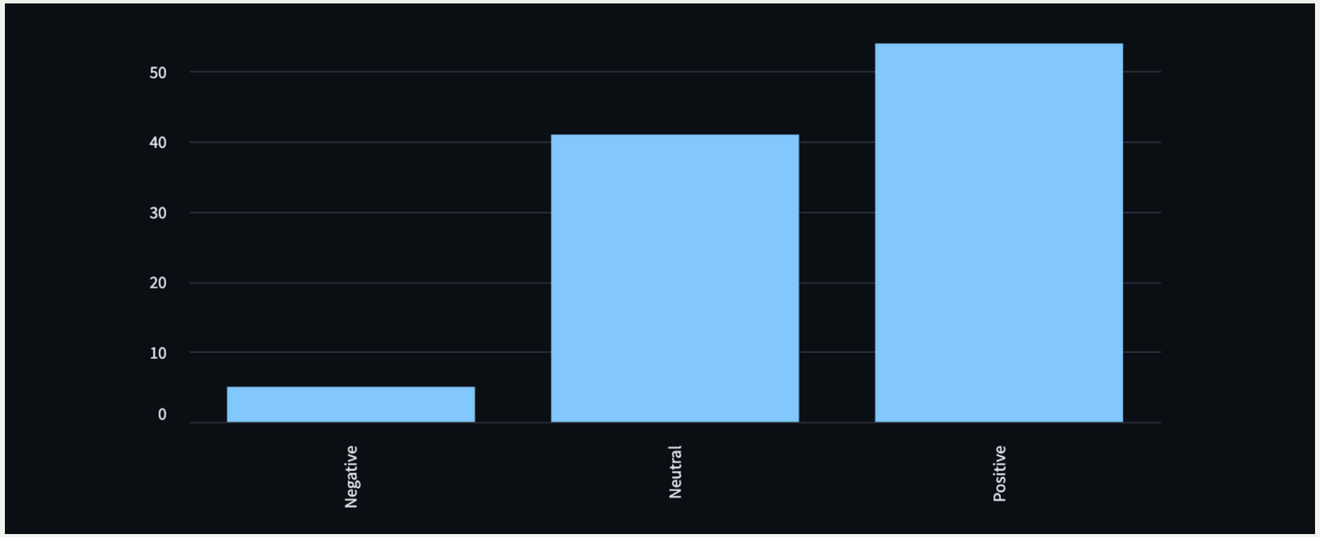
Analyze the sentiment of comments on any YouTube video!

Enter YouTube Video URL:

https://www.youtube.com/watch?v=HxjDgR8itZM

Analyze Comments

	Comment	Sentiment
0	UPCOMING SHOW TICKET LINK MULTIPLE CITY TICKET LINK https://in.bc	Neutral
1	😂😂😂😂	Neutral
2	Abe yar bc 🤣🤣🤣	Neutral
3	Have been watching Gaurav bhai's standup from a very long time and thi	Positive
4	Great ❤	Positive
5	Bro I mean 😭😭😭😂😂😂	Neutral
6	People should also take action against such content. Like Samay Raina.	Positive
7	👍👍👏👏👏👏👏👏	Neutral
8	congratulation	Positive
9	14:04 Every Boy/Man can relate to this , This is the reason why we don't s	Negative



Projects

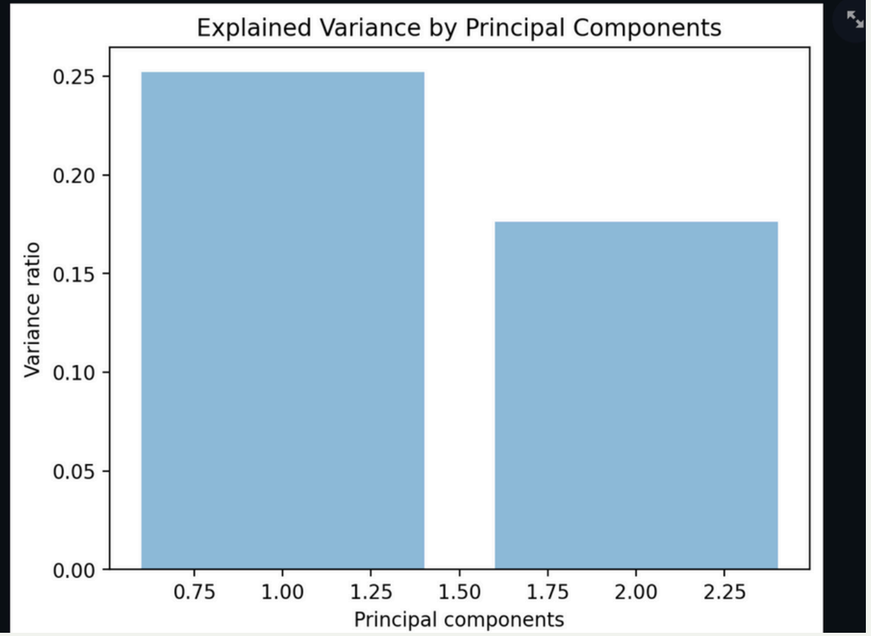
PCA Analysis - Wine Quality Dataset:

- **Objective:** Perform real-time Principal Component Analysis (PCA) on the Wine Quality dataset.
- **Tech Stack:** Python, Streamlit, Pandas, NumPy, Matplotlib, and Scikit-learn.
- **Features:** Upload custom datasets, visualize explained variance, and generate PCA plots.
- **Outcome:** Interactive tool for dimensionality reduction and data analysis.

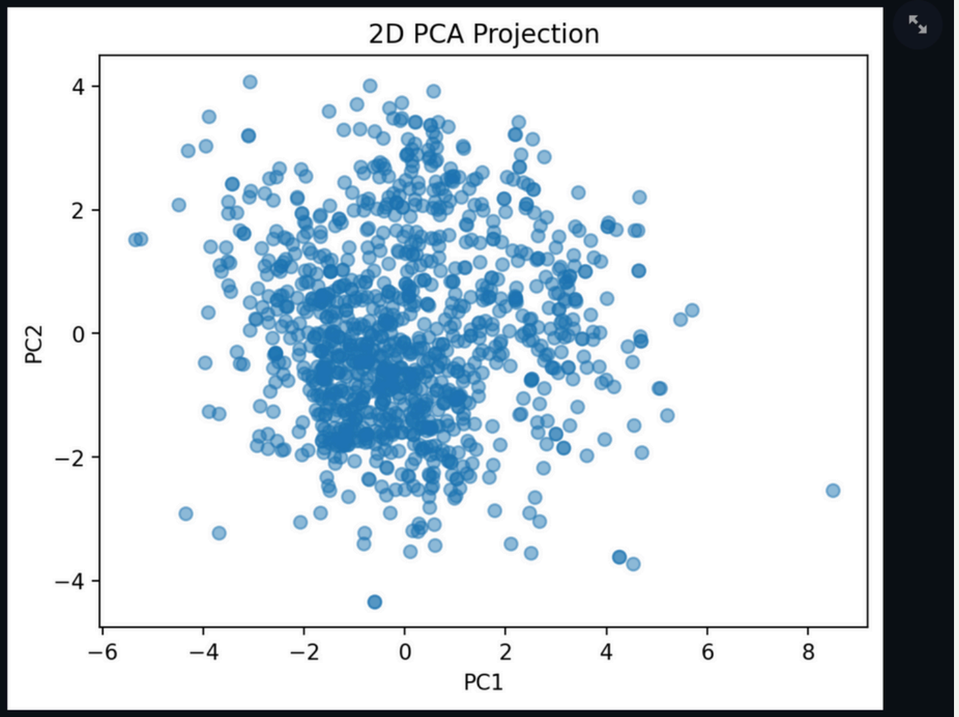
Projects

Explained Variance Ratio

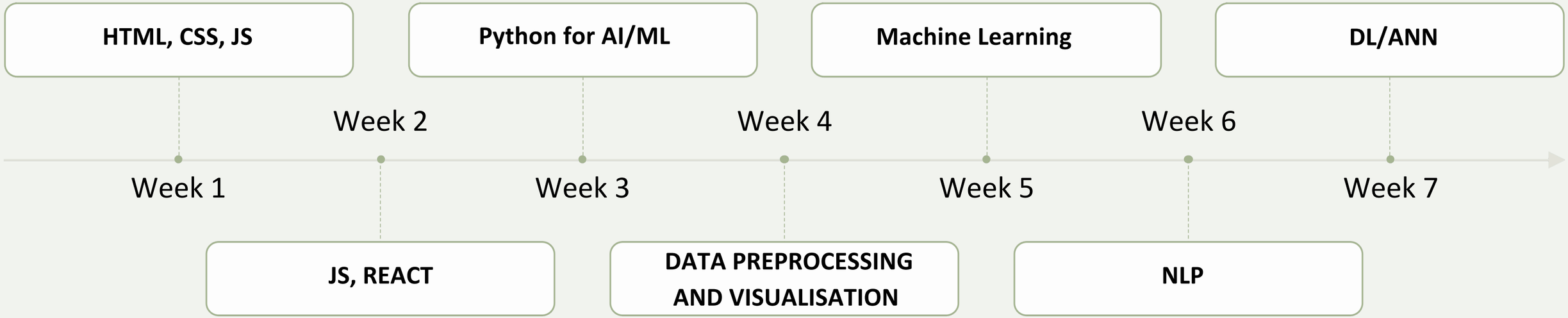
value
0.2519
0.1763



2D PCA Visualization



Timeline Chart for Project Work



Future Work

1. Transfer Learning
- Feature Extraction
- Fine-Tuning for enhanced model performance

2. Large Language Models (LLMs) & Transformers
- GPT, BERT, LLaMA architectures
- Understanding the Attention Mechanism

3. LangChain & Prompt Engineering
- AI Chatbots & AI Agents
- Prompt tuning & chaining for better responses

4. Advanced AI Tools & Techniques
- Working with Hugging Face & Pipenv
- Implementing vector databases for real-world AI solutions

THANK YOU