TSP- AI ML Fundamentals (Capstone Project)

An End-to-End Data Science Project with ChatGPT

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Problem Statement

This project aims to create a loan approval system using **machine learning** and **ChatGPT's NLP**. It will analyze past loan data to **predict creditworthiness** for new applicants. Integrating ChatGPT automates customer interactions, improving the loan application process. By combining analytics with conversational AI, it aims to **boost accuracy and speed of approvals**, enhancing the user experience for applicants and loan officers.

Proposed Solution

The proposed end-to-end data science project with **ChatGPT** and a loan dataset involves **data preprocessing, feature engineering, and training a machine learning model** for loan approval prediction. Integration of ChatGPT enables a conversational interface for user inquiries and assistance. Thorough testing ensures model accuracy in real-world scenarios.

Algorithm & Deployment

❑ **Data preprocessing**: Clean and prepare loan dataset, handle missing values and outliers.

❑ **Feature engineering**: Extract relevant information to enhance model performance.

❑ **Machine learning model training**: Train model (e.g., logistic regression, random forest) to predict loan approval/rejection based on historical data.

❑ **Integration of ChatGPT**: Enable conversational interface for user inquiries and assistance.

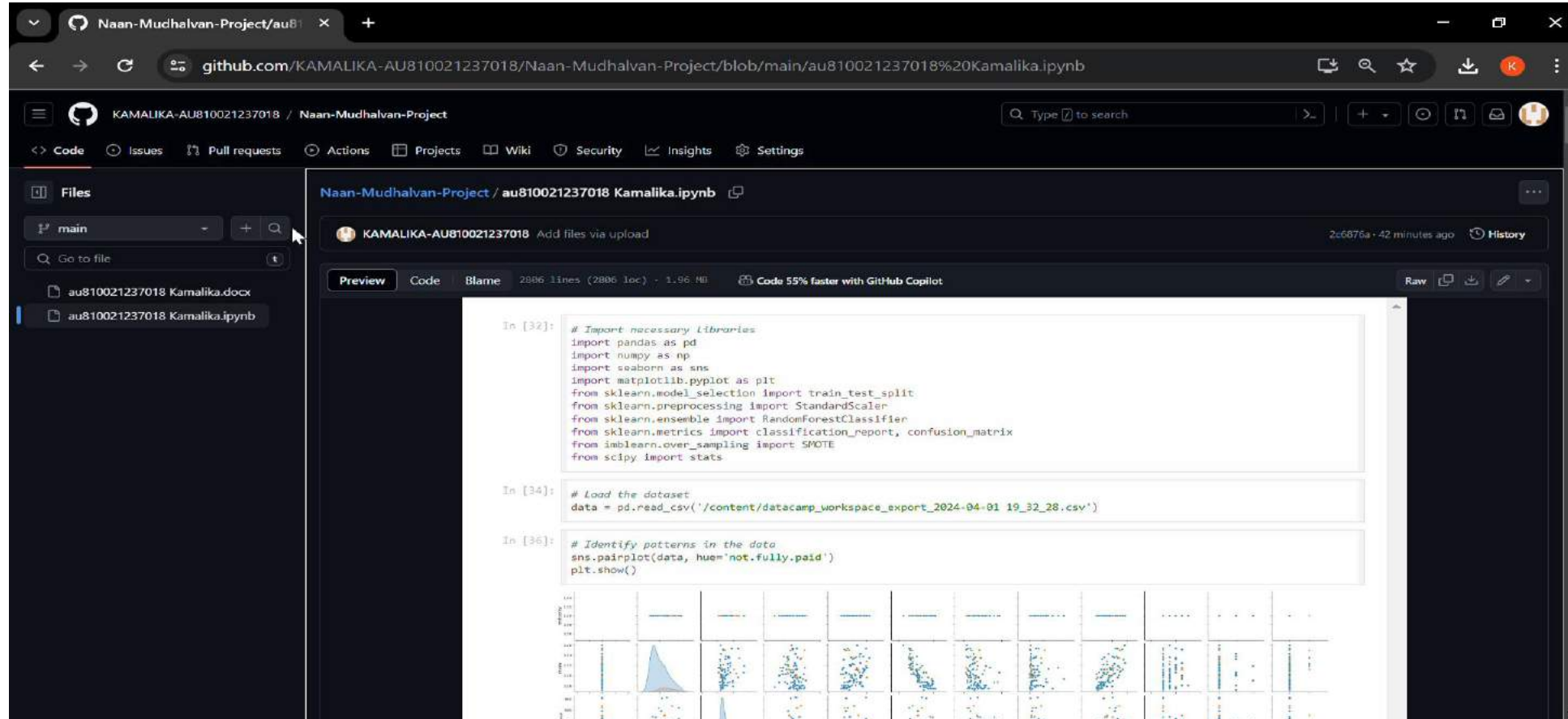❑ **Testing and evaluation**: Ensure model accuracy and effectiveness in real-world scenarios.

GitHub Link

https://github.com/KAMALIKA-AU810021237018/Naan-Mudhalvan-Project

Youtube Link

https://youtu.be/SHL5wpMfCzU

Project Demo(Recorded Video)

Conclusion

Implementing an end-to-end data project with **ChatGPT** for a loan dataset enhances customer engagement and service efficiency in lending. Through **NLP**, it facilitates seamless communication, providing instant assistance and guidance. Meticulous data preprocessing, model training, integration, and deployment ensure accurate and relevant responses, streamlining the user experience. **Continuous monitoring and updates** make the system adaptive and responsive to evolving user needs, optimizing loan management processes.

Future Scope

In the future, leveraging ChatGPT for loan datasets offers exciting prospects. Advancements in **NLP** and **ML** will enable sophisticated loan application systems. Integration of diverse data sources like social media or transaction history can enhance risk assessment. **Voice recognition** can improve accessibility. Collaboration with financial institutions and regulators can ensure trust and compliance. Overall, the future of ChatGPT in loan management holds great promise for **innovation and financial inclusion.**

References

1. Project Github link, Ramar Bose , 2024

2. Project video recorded link (youtube/github), Ramar Bose , 2024

3. Project PPT & Report github link, Ramar Bose , 2024

THANK YOU