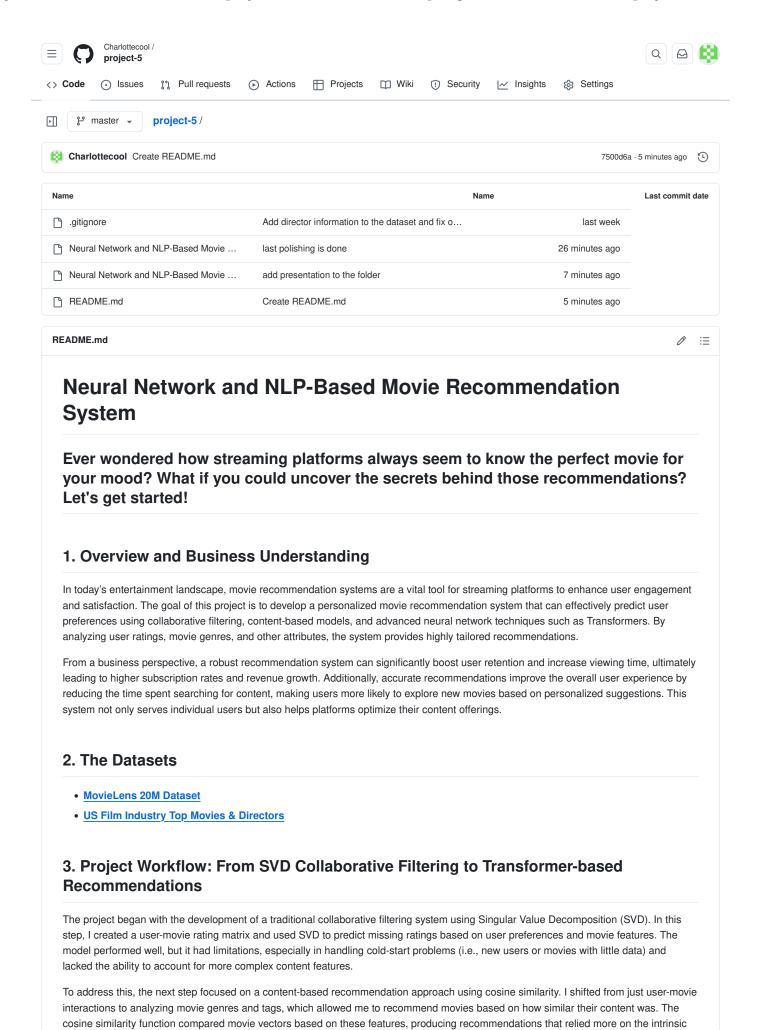
properties of the movies themselves.



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Following this, I introduced a neural network model to improve the recommendation system's performance. By using a deeper learning method, I aimed to capture non-linear relationships between user preferences and movie features, further refining recommendations. While this model offered better performance than the basic SVD, it still showed some limitations in diversity and accuracy.

In the final stage, I implemented a transformer-based model to enhance the recommendation system's capability. Using pre-trained embeddings from SentenceTransformer, I generated vector representations for movie genres and tags, providing richer semantic content. The transformer model enabled more context-aware recommendations, resulting in a system that better understood user preferences by leveraging more complex content and relational data.

Overall, this multi-phase development process led to a robust recommendation system, combining collaborative filtering, content-based analysis, and advanced deep learning techniques. The final product was able to provide accurate, diverse, and contextually relevant recommendations.

## 4. Deployment

I've deployed the recommendation system as a simple and user-friendly  $\underline{\text{web app}}$ .

## For more information

Check out the full Jupyter notebook and the presentation.

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