# Topic:
# Cell Phone Recommendation System with Sentiment Analysis

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# Outline

- Dataset: Amazon Product Reviews dataset (https://www.kaggle.com/datasets/grikomsn/amazon-cell-phones-reviews?select=20191226-items.csv)

- Goal: The goal of this project is to develop a recommendation system that enhances user satisfaction and engagement by providing personalized product suggestions based on sentiment analysis and Word2Vec embeddings from customer reviews of cell phones.

- Result: The result of this project is an advanced recommendation system that effectively improves user satisfaction and engagement on the online retail platform by offering personalized product suggestions based on sentiment analysis and Word2Vec embeddings.

# Tools used

# Dataset

- The dataset has been obtained by combining two datasets. It is an Amazon dataset about cell phone reviews by several customers.
- This dataset contains 67,986 reviews from Amazon about cell phones from 2004 up until 2020. Each review can be associated with an item and brand name and comes with a rating ranging from 1 to 5. This makes the dataset a perfect sample for sentiment analysis.
- The rating is an integer value ranging from 1 to 5, with 1 being the lowest (negative sentiment) and 5 being the highest (positive sentiment). The dataset is reflective of customer interactions and opinions about various products offered on the platform.
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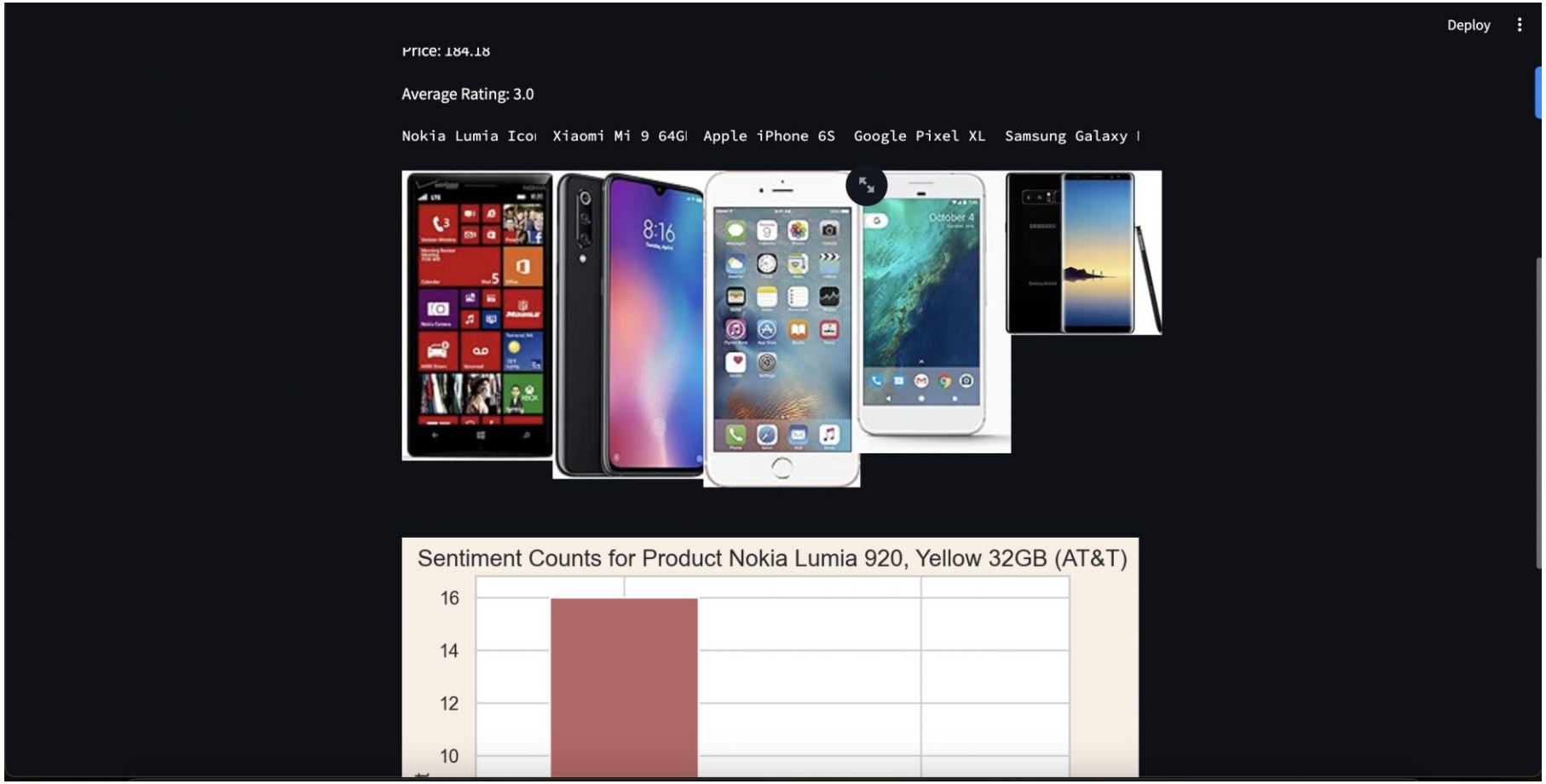
# Methodology

# Results

- Successfully developed both a Recommendation Model and a Sentiment Analysis Model.
- Designed and implemented a user-friendly UI using Python Streamlit.
- The UI provides real-time sentiment analysis reults for selected products, offering users insights into product satisfaction.
- Utilized the recommendation model to suggest 5 other products that align with the user's initial choice, enhancing the overall shopping experience.

# Snapshot of the working model:



# Conclusion

- This project represents a significant advancement in the field of recommendation systems, particularly in the context of online retail. By integrating sentiment analysis with sophisticated NLP techniques and Word2Vec embeddings, the system not only enhances user experience but also provides valuable insights for online retailers in the cell phone market.