Telkomsel

MyTelkomsel VS User

Understanding MyTelkomsel, the AI Way

Uncovering user sentiment and complaints using IBM Granite-powered analysis

By: Inka Sharatu Puspadarma →

HACKTIV8

IBM **SkillsBuild**

Project Background

Dikutip dari databoks.com, 2025

Telkomsel

Provider Internet Terbanyak digunakan Masyarakat Indonesia

Telkomsel menjadi operator seluler yang paling banyak digunakan oleh 52,3% responden melalui beberapa produk, yakni:

Telkomsel Halo

1 *Telkomsel Halo adalah prduk mobile internet provider dengan skema pasca-bayar*

SIMPATI

2 *Simpati adalah produk mobile internet provide dengan skema pra-bayar ter-paket*

by.U

3 *byU adalah prduk mobile internet provider dengan skema pasca-bayar yang memberikan kebebasan dalam memilih paket*

Berdasarkan laporan revenue Telkomsel, 2024

MyTelkomsel

Kontributor utama terhadap pendapatan digital Telkomsel

95% transaksi digital Telkomsel dalam pembelian produk-produk sebelumnya lewat MyTelkomsel

Gerbang utama pembelian produk Halo dan Simpati

Tapi...

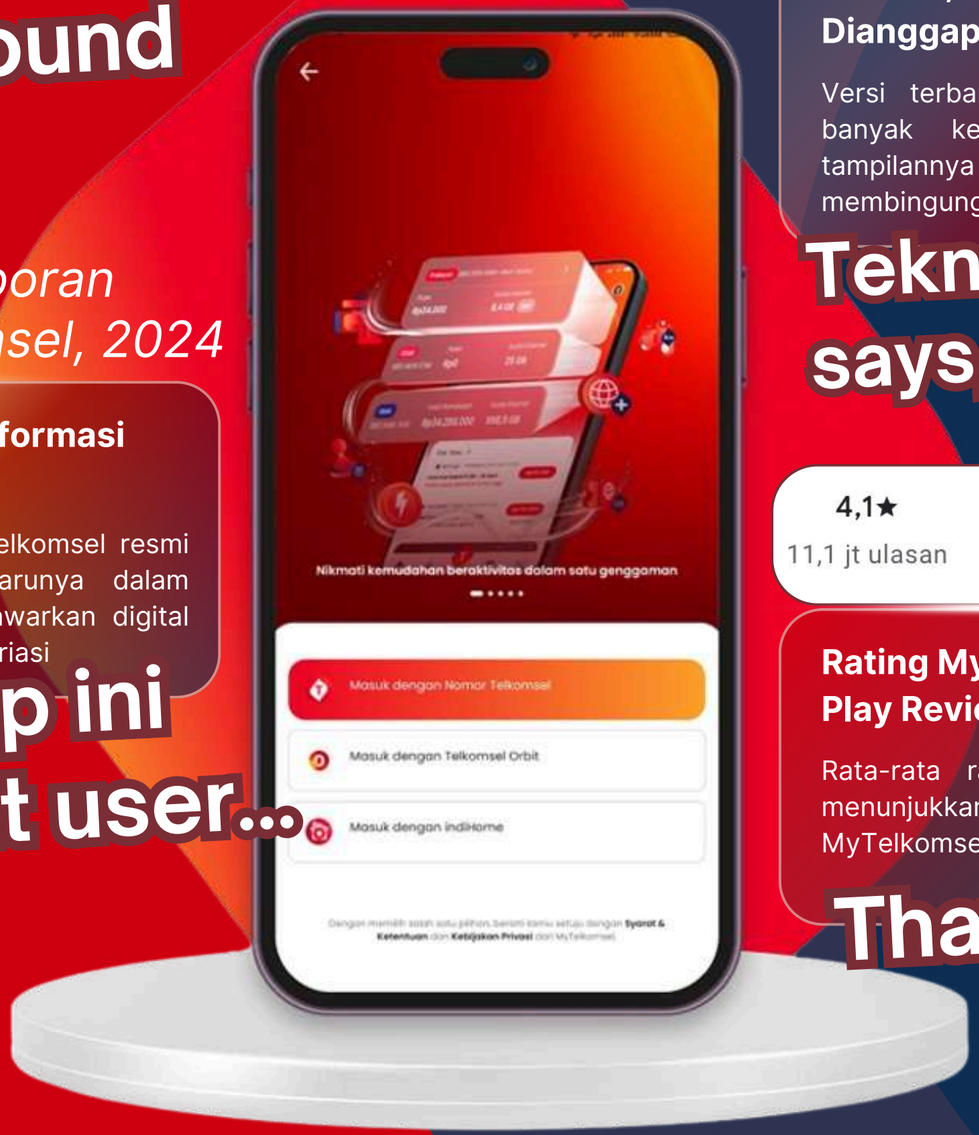
Project Background

Berdasarkan laporan revenue Telkomsel, 2024

MyTelkomsel Transformasi menjadi Super App

Pada 12 Juni 2024, MyTelkomsel resmi meluncurkan versi terbarunya dalam bentuk Super App, menawarkan digital transaksi yang lebih bervariasi

SuperApp ini membuat user...



Disorot, Aplikasi MyTelkomsel Dianggap Semakin Ribet

Versi terbaru MyTelkomsel justru menuai banyak keluhan — pengguna menilai tampilannya semakin rumit, lambat, dan membingungkan dibanding versi sebelumnya.

Teknodaily News says, 2024...

4,1★	100 jt+	3+
11,1 jt ulasan	Download	Rating 3+

Rating MyTelkomsel pada Google Play Review

Rata-rata rating 4,1 dari 11 juta ulasan menunjukkan pengalaman pengguna MyTelkomsel masih jauh dari kata sempurna.

That's Why...

We Need to Analyze!

1. *Mengapa transformasi MyTelkomsel menjadi Super App justru menuai banyak keluhan dari pengguna?*
2. *Kenapa MyTelkomsel yang menyumbang >95% transaksi justru dinilai makin sulit digunakan oleh penggunanya?*
3. *Apa saja jenis keluhan utama pengguna MyTelkomsel, seberapa mendesak keluhannya, dan bagaimana seharusnya perbaikannya dilakukan?*

Project Overview

Uncovering user sentiment and complaints using IBM Granite-powered analysis

Purpose

Diagnose: Understand why MyTelkomsel's Super App transformation triggered user dissatisfaction

Evaluate: Assess usability challenges in the app despite its critical role in Telkomsel's digital transactions

Recommend: Identify main complaint categories and propose data-driven solutions to enhance user experience

Tools

IBM Granite 3-8b-instruct

Python, Streamlit & Colab

Sentiment Analysis Pipeline

Data Collection
Scrap MyTelkomsel Google Review

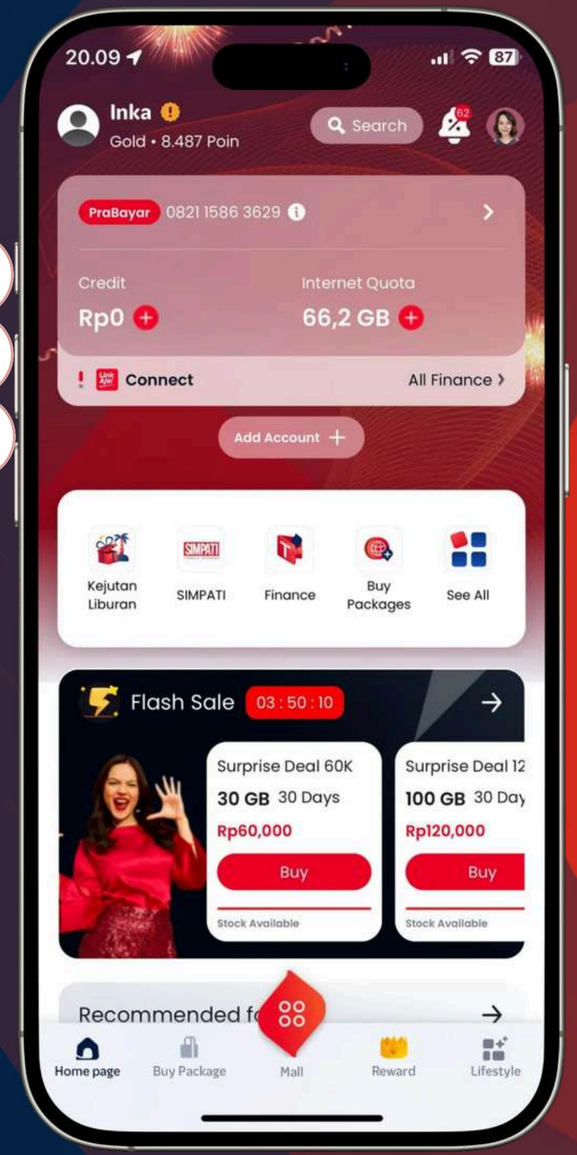
Data Preprocessing
Data Cleaning and Dropping Unnecessary Column

Feature Extraction
Stopword and Other Tokens to Clean and Fixing Data

Model Training
Train IBM Granite Model to Analyze and Summarize

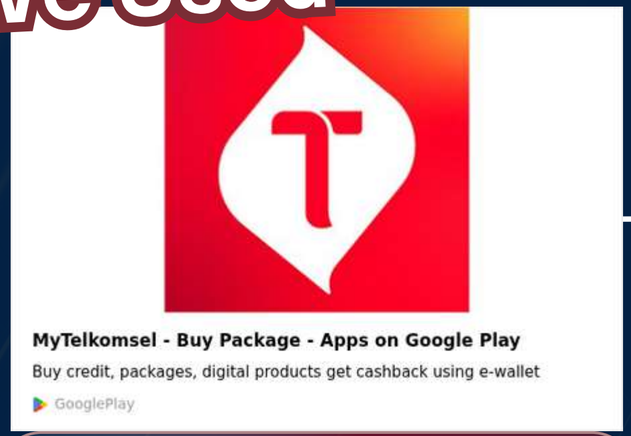
Model Evaluation
Evaluate IBM Granite by Prompt Refined & Parameter

Visualization
Visualize Insight and Results using Streamlit



Dataset We Used

1



MyTelkomsel Google Play Review

Step 1: Scrap MyTelkomsel Review

Step 2: Data Scrapped based Most Relevant

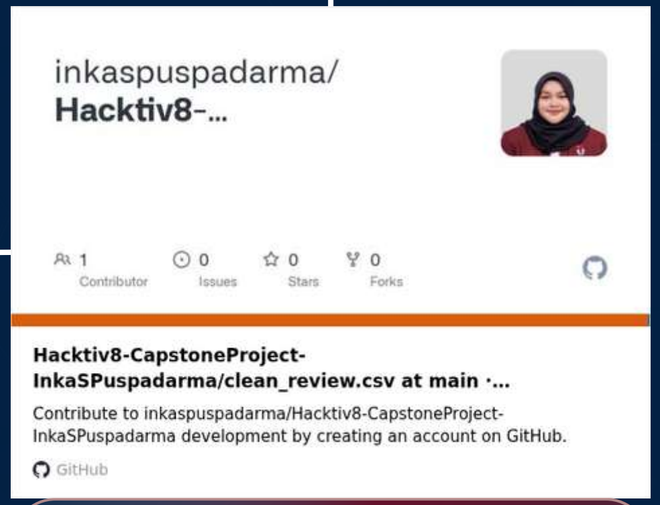
Step 3: Clean Data with Unnecessary Column

Step 3: Using Various Tokens to Clean & Finalize the Data

Output: MyTelkomsel Google Play Review that are cleaned through those steps.

This is the data that are ready to be used by IBM Granite for data analyzing and summarizing

2



Clean_Review.csv

Analysis Process

```python
import pandas as pd
import numpy as np

from google_play_scraper import Sort, reviews, app

result, continuation_token = reviews(
    'com.telkomsel.telkomselcm',
    lang='eng',
    sort=Sort.MOST_RELEVANT,
    count=100,
    filter_score_with=None
)
```

1.Scraping Data

Using google play scraper to scrape MyTelkomsel Review based on the Most Relevant Reviews

```python
df_dataused= df_review.drop(columns=
["reviewId","userImage",
"reviewCreatedVersion", "at",
"replyContent", "repliedAt"])

df_dataused.head(100)
```

2.Column Dropping

Deleting unnecessary column to create a new data with columns that are used: content, thumbsup, etc

```python
nltk.download('stopwords')
nltk.download('punkt')
nltk.download('wordnet')
nltk.download('punkt_tab')
```

3.Clean Text Feature

Using stopwords and lemmatization to create a clean english text on content (review) column

```python
def remove_emoji(text):
    emoji_pattern = re.compile(
        "["
        u"\U0001F600-\U0001F64F"
        u"\U0001F300-\U0001F5FF"
        u"\U0001F680-\U0001F6FF"
        u"\U0001F1E0-\U0001F1FF"
        u"\U00002700-\U000027BF"
        u"\U000024C2-\U0001F251"
        "]+", flags=re.UNICODE)
```

4.Emoji Cleaning

Deleting emoji that are included in content (review) column using function and tokens

5.IBM Granite-Classification

1.Labelized Sentiment with Negative (0), Netral (1), and Positive (2)

2.Categorize Complaint based:
1 = Login/Verification
2 = Payment/Top-up
3 = Crash/Bug/Error
4 = Performance/Slow
5 = UI/UX/Navigability
6 = Package/Data/Promo
7 = Other

3. Labelized Urgency with Urgent (1) and Not Urgent (2)

6.IBM Granite-Summarize

1.Top 5 Most Frequently Complaint Summarization based the complaint category from previous classification

2.Top 5 Most Thumbs Up Review Summarization

Insights&Findings

Labeled Review of MyTelkomsel

Sentiment Negative (0): 93%, Netral (1): 6%, and Positive (2): 1%

Top 3 MyTelkomsel Complaint Category

1.Performance/Slow (4): 26; UI/UX/Navigability (3): 22;
3.Crash/Bug/Error (1): 20

Urgency Category of Resolution

Urgent (1): 86% and Not Urgent: 14%

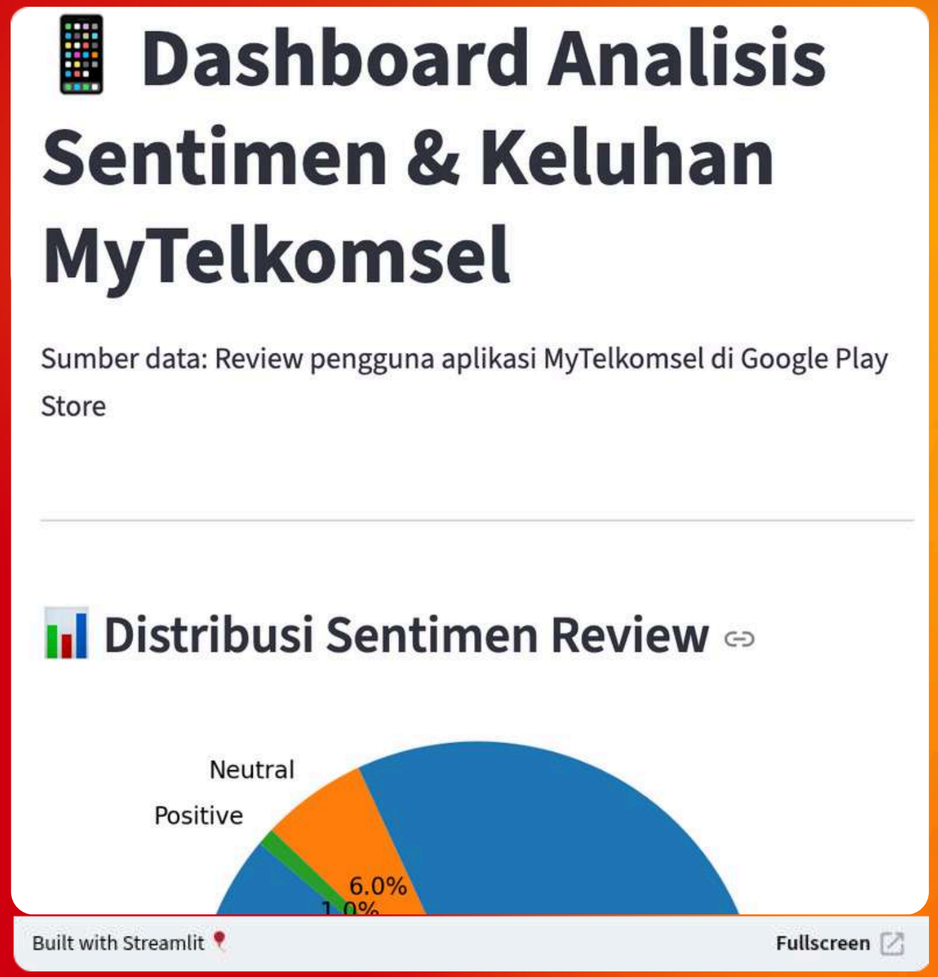
Top 5 Most Frequent Complaint in Each Category

1.Performance: Lemot, navigasi ribet, fitur lambat
2.UI/UX: Tampilan rumit, fitur numpuk, iklan ganggu
3.Crash: Sering crash, bug update, boros data
4.Login: Sulit login, OTP error, sering logout
5.Payment: Gagal bayar, saldo error, opsi terbatas

Top 5 Most Thumbs Up Reviews

1.Inability to edit verified personal information; 2.App bugginess and slow loading times; 3.App crashes and persistent loading issues; 4.Frequent app crashes upon opening; 5.Increased service prices

Visualization



Solution Recommendation

Failed Login and Verification

Adding a “Remember Me” feature will uplift the prevention rate on login failure, also OTP Optimization is needed

Application Performance

Application Keep Crashing

Poor UI/UX and Navigability

These trifecta affects each other, with a poor UI/UX and lots of Unnecessary Feature will create Slow Load Performance and Lead into App Crashing. Redesign app and its coding will be a best way to solve this problems, here is one of my ideas on redesigning the homepage

Starting with Homepage...

AI Support Explanation

IBM Granite 3-8b-instruct

Purpose: Multi-layer opinion classification based on contextual prompts

With this I...

IBM Granite AI Categorize

1.Labelize Sentiment
2. Complaint Category
3. Urgency of the Complaint

IBM Granite AI Summarize

Summarize reviews on Top 5 Most Frequent Complaint and Top 5 Most Agreed on Complaint into insights

Inka Sharatu Puspadarma

Education

- *Bachelor in Information System, Telkom University, 2025*
- *Certified - Google Professional in Project Management, Google, 2025*
- *Certified Data Classification and Summarization using IBM Granite, IBM SkillsBuild, 2025*
- *Certified Associate Project Management, Project Management Institute, 2024*
- *Certified UX Design Fundamentals, IBM SkillsBuild, 2024*

Work Experience

Jun 2025 - Present
Intern MyTelkomsel DevOps Utility at PT. Telekomunikasi Selular

Sep 2024 - Dec 2024
Intern Loyalty and Engagement at PT. Telekomunikasi Selular

Jul 2024 - Aug 2024
Intern Business Process Analyst at PT. Telekomunikasi Indonesia

Sep 2023 - Jan 2024
Business Process Management and Notation Practicum Assistant at Telkom University