

1. Project Title

MindfulFeed AI – Classifying YouTube Content as Mindful or Mindless using Free Local AI

2. Objective

To develop a lightweight, AI-powered application that promotes digital well-being by helping users reflect on their content consumption. The system identifies whether YouTube content is “Mindful” (educational, focus-driven) or “Mindless” (distracting, low value), using a free, offline sentiment classification model.

3. Tools & Technologies Used

| Tool/Library | Purpose |
|----------------------------|--|
| Google Colab | Notebook platform for implementation |
| Python | Core programming language |
| Transformers (HuggingFace) | Local text classification (DistilBERT) |
| Google API Client | YouTube video search |
| Pandas | Data storage and logging |
| Plotly | Interactive visualizations (charts) |
| Torch | Backend for DistilBERT model |

4. Project Workflow

✔ Step-by-step Overview:

- YouTube Search Input:**
User provides a search query (e.g., "focus tips", "deep work")
- Video Retrieval via YouTube API:**
Fetches video title and description using YouTube Data API
- AI-Based Content Classification:**
Uses a free DistilBERT-based model to classify each video as:
 - Mindful** (if text is positive, useful)
 - Mindless** (if it's viral, shallow, or distracting)
- Logging Results:**
Stores video titles, classifications, and timestamps in mindfulfeed_log.csv
- Analytics & Dashboard:**

- 🥧 Pie Chart: Distribution of Mindful vs Mindless content
- 📊 Bar Graph: Daily usage trends

6. Bonus Features:

- ⚠️ Daily mindless video warning
- 🎯 Mindful content goal tracker
- 📁 Mindful video library (optional)

5. Sample Output

✅ Classification Example:

📄 Title: Deep Work Routine That Changed My Life

📄 Description: How to focus and reduce distractions using proven techniques.

🧠 Classified as: Mindful

📊 Chart Previews:

- Pie Chart → Mindful: 80%, Mindless: 20%
- Daily Bar Chart → Showing video types consumed per day

(Screenshots inserted in original notebook / demo attached)

6. Results & Conclusion

- The project successfully demonstrates how AI can be used for **digital well-being**.
- With **zero paid APIs**, it delivers **real YouTube integration**, **live classification**, and **trend visualization**.
- The system is lightweight, impactful, and future-ready — applicable in personal productivity tools and education.

7. Future Scope

- Add user authentication & personal watch history (via OAuth)
- Build a Chrome Extension to detect scrolling patterns
- Fine-tune a custom classifier trained on "mindful/mindless" YouTube labels
- Deploy as a Streamlit app with weekly wellness reports

✅ Attached Files:

- MindfulFeedAI_Final.ipynb
- mindfulfeed_log.csv
- mindfulfeed_charts.png (optional screenshots)
- MindfulFeedAI_MiniProject_Report.pdf (*this file*)

Let me know if you'd like me to generate this as a **ready-to-download PDF** or help with adding screenshots before finalizing it!