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Desarrollo de Aplicaciones Móviles (LIS4012)

LAB 05: Update Your Problem Statement

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Problem Statement Design

Social media is a key communication tool, but it often leads to misunderstandings, impulsive reactions, and unintended negativity[6]. Users frequently post emotionally charged messages without considering their tone, which can result in conflicts, damaged reputations, and even mental health issues. As digital interactions continue to dominate personal and professional communication, there is a growing need for tools that help users reflect before posting, ensuring their messages are clear, respectful, and appropriate.

The primary users affected include:

- Teenagers and young adults, who often post impulsively and may not fully consider the consequences of their words.

- Public figures and influencers, whose reputations can be significantly impacted by the tone of their online interactions.

- Non-native speakers, who may struggle with nuances in tone and language, leading to potential misinterpretations.

- General social media users, who aim to maintain constructive and respectful communication online.

Feature	Existing Solutions	VibeCheck
Real-Time Detection	Limited AI-based tone detection	AI + NLP (multimodal)
Source Verification	No existing verification	Automated + crowdsourced feedback
Text Emotion Analysis	Basic sentiment analysis in some tools	Advanced AI-powered sentiment and tone analysis
Credibility Score	No structured score	Dynamic tone rating (1-5)
Multilingual Support	English focused tools	English and Spanish

Several applications currently offer features related to tone analysis and sentiment detection for social media content. Here are some notable examples:

Brandwatch is a social media analytics platform known for its advanced social monitoring capabilities, including sentiment analysis and trend tracking. It gathers data from various sources to perform deep analyses of social conversations and create custom dashboards for performance measurement. [1]

Limitations:

- Limited Personalization: Brandwatch provides broad sentiment analysis but may not tailor feedback to individual users' communication styles or intents.

- Lack of Real-Time Feedback: While it offers comprehensive analytics, it may not provide immediate suggestions for tone improvement before posting.

Sprout Social provides insightful analytics across supported social media platforms, helping users improve their marketing and branding strategies. It includes features like a social inbox for managing messages and social listening tools for monitoring brand mentions and sentiment. [2]

Limitations:

- Limited Personalization: While offering sentiment analysis, Sprout Social may not consider individual communication styles or provide personalized tone suggestions.
- Lack of Real-Time Feedback: The platform offers analytics but may not provide immediate, in-the-moment feedback on tone before content is posted.

VibeCheck is designed to overcome the shortcomings of existing solutions through the following features:

- Personalized Feedback: Utilizing advanced AI and Natural Language Processing (NLP), VibeCheck analyzes individual writing styles and intents, offering tailored suggestions to enhance tone and clarity.
- Real-Time Analysis: VibeCheck provides immediate feedback as users compose their messages, allowing for on-the-spot adjustments to ensure the desired tone before posting.

- Multilingual Support: Supporting 2 languages, VibeCheck caters to a diverse user base, assisting non-native speakers in navigating linguistic nuances effectively.
- Constructive Suggestions: Beyond detecting negative sentiment, VibeCheck offers actionable recommendations to improve message tone, fostering more positive and effective communication.

By addressing these specific limitations, VibeCheck aims to enhance digital interactions, making them more empathetic, respectful, and clear.

The VibeCheck app provides a real-time emotion recognition and tone refinement tool, fostering clearer, more constructive digital communication. By addressing the following problems:

- Studies have shown that emotionally charged social media posts can lead to increased conflicts, misinformation, and cyberbullying. A 2023 Pew Research report found that 59% of teenagers have experienced some form of online negativity due to impulsive posting. [3]
- Research from the American Psychological Association (APA) highlights that social media impulsivity correlates with higher stress and anxiety levels, particularly among young adults. [4]
- A Harvard Business Review article notes that poorly worded online communication can harm professional relationships and personal branding, emphasizing the need for tools that help users refine their tone. [5]

The VibeCheck project addresses a very present gap by providing real-time emotion recognition and tone refinement for social media users. Unlike existing solutions that focus on sentiment analysis, content moderation, or brand monitoring, our app is designed for individual users who want to ensure their messages are clear, respectful, and constructive before posting.

Current tools such as Brandwatch and Sprout Social offer sentiment analysis but don't have real-time feedback nor AI-driven tone suggestions tailored to individual writing styles. Additionally, they are often monolingual, subscription-based, and focused on business analytics rather than personal communication improvement. In contrast, VibeCheck provides

immediate feedback, and constructive recommendations, empowering users to communicate more effectively.

By addressing tone sensitivity, linguistic diversity, and user-centric feedback, VibeCheck is a solution that ensures social media interactions are thoughtful, professional, and inclusive digital spaces more positive and impactful.

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