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"INTEGRATING A RESEARCH-BASED HAPPINESS ALGORITHM INTO SOCIAL MEDIA PLATFORMS FOR ENHANCED DIGITAL WELL-BEING"

Sarang Kapse[1*], Khushi Burnwal[2], Muskan Gautam[3], Shreya Sengupta[4]

[1]Deputy Manager Steel Authority of India (Material Management), B.E Mechanical Engineer, MBA (Operations Management), sarang.kapse54@gmail.com*
[2]Sales Development Intern, Christ university, Banglore, khushiburnwal08@gmail.com
[3]Big Mint Executive- Events, looks after the content part in business conferences & webinar, muskan@bigmint.com
[4]Deputy Manager (Marketing- Sales operations) at Bhilai Steel Plant, Steel Authority of India Limited. Zonal Representative at Officer's Association, BSP, sengupta.shreya.ss@gmail.com

**Corresponding Author:*

Abstract: *This paper explores the integration of the HAPPI v1.0 happiness algorithm into social media platforms and digital ecosystems to monitor and enhance user well-being. Building upon empirical findings from positive psychology, behavioural science, and the World Happiness Report, the study proposes a method for tracking and influencing happiness in real-time through digital behavior. By combining passive digital usage data with active user feedback and AI-driven sentiment analysis, we propose a hybrid system to measure happiness indicators and suggest personalized well-being interventions.*

Keywords: *Happiness algorithm, digital well-being, social media, sentiment analysis, user behavior, mental health monitoring*

1. Introduction The pervasiveness of social media and digital devices has transformed how individuals interact, work, and find meaning. However, these platforms have also been linked to declining mental health due to overuse, social comparison, and digital addiction. There is a growing demand to reimagine digital experiences with human well-being at the centre. This paper proposes a framework to embed a research-based happiness algorithm (HAPPI v1.0) into social media platforms for real-time monitoring and enhancement of user happiness.

2. Literature Review Research has shown that emotional well-being is influenced by digital behavior patterns such as screen time, engagement types, and exposure to negative content. The World Happiness Report, Harvard Grant Study, and works by Seligman and Lyubomirsky emphasize the roles of relationships, purpose, gratitude, and health. Meanwhile, digital wellness research highlights screen addiction, late-night usage, and passive scrolling as key detractors of happiness.

3. The HAPPI v1.0 Algorithm: A Recap HAPPI v1.0 quantifies happiness based on nine dimensions: Social Connectedness, Physical Health, Mental Wellbeing, Purpose Score, Gratitude Practiced, Autonomy Level, Financial Security, Contribution Score, and Positivity Ratio. Weighted scoring based on empirical research allows the calculation of a composite Happiness Score.

4. Integration Framework for Social Media Platforms

4.1 Data Collection

- *Passive Data:* Screen time, scroll behavior, frequency of engagement, time of use, sentiment of content consumed/posted.
- *Active Data:* Mood check-ins, micro-journaling, well-being quizzes.

4.2 AI and Sentiment Analysis Natural language processing (NLP) models analyze user-generated content to derive emotional valence, compute PositivityRatio, and detect digital fatigue or negative trends.
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4.3 Digital Wellness Score A supplementary metric that incorporates screen time, late-night use, physical activity, and sleep data (from wearables or device logs). This influences Physical Health, Mental Wellbeing, and Autonomy Level dimensions of the algorithm.

4.4 User Feedback and Nudges The platform provides:

- Real-time feedback (e.g., “You've been scrolling for 30 minutes. Try a mindful pause?”)
- Weekly well-being dashboards
- Personalized suggestions (connect with friends, practice gratitude, take breaks)

5. Privacy and Ethical Considerations

- Strict opt-in mechanisms for user data
- Anonymized, local processing where possible
- Clear communication of how data supports well-being without manipulation

6. Applications

- **Social Media Platforms:** Enhance user well-being and reduce harm.
- **Mental Health Apps:** Incorporate dynamic happiness scores.
- **Enterprise Tools:** Improve employee engagement and work-life balance.
- **Education Platforms:** Support student mental health.

7. Limitations and Future Research Challenges include user data privacy, algorithmic bias, cultural variation in happiness indicators, and reliance on self-reported data. Future work may involve real-world trials, federated learning, and personalization using longitudinal models.

8. Conclusion Embedding a happiness algorithm into digital platforms can bridge the gap between technology use and mental well-being. With thoughtful integration and ethical safeguards, social media can evolve from being a passive experience to a proactive tool for psychological health and happiness.

References:

- Lyubomirsky, S. (2007). *The How of Happiness.*
- Seligman, M. (2011). *Flourish: A Visionary New Understanding of Happiness and Well-being.*
- World Happiness Report (2023).
- Harvard Grant Study.
- Kahneman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being.
- Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour.*