

Neuroadvertising study to create emotional and cognitive responses in recipients to improve advertising strategies and effectiveness

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Abstract:

Neuroadvertising relates specifically to the application of neuromarketing in advertising practices and employs principles from neuroscience. Recently researchers have depicted neuroadvertising or neurobranding as the 'third wave' of advertising, focusing on marketing across television, the internet, or the printer. These theories can help brands develop stories, pictures, and messages in an attractive way favorable to the emotions and thoughts of the brand's recipients. Neuroadvertising or cognitive branding is becoming an increasingly relevant field due to the integration of neuroscience and advertising aimed at understanding the fundamental features of recipient behaviors. With the assistance of these insights, advertisers can improve the engagement level, the emotional bond, and the sales of the product. This research will study and attempt to understand what neuroadvertising and neuromarketing are, how to measure them, how to use them in advertising to get the most out of advertising campaigns and what are the strategies for applying this type of advertising. The research includes the applied part, which is collecting information and analyzing some advertisements made by companies that used and applied neuroadvertising and neuromarketing, with an explanation and analysis of each advertisement and how it was applied.

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References:

- 1- Khayrul Alam, (July 2024), An Overview of Neuromarketing Strategy Applied by Marketers as a Marketing Tool, Asian Journal of Social Science and Management Technology, Volume 6, Issue 4.
- 2- Arjun Murti, Rishul Ghosh, (September 2023), The Impact of Emotional Appeals in NeuroMarketing: Analyzing the Brain Responses of Recipients to Emotional Advertising Campaigns, International Journal of Enhanced Research in Management & Computer Application, Vol. 12 Issue 9.
- 3- Juan Sánchez-Fernández, Luis-Alberto Casado-Aranda, Ana-Belén Bastidas-Manzano, (February 2021), Recipient Neuroscience Techniques in Advertising Research: A Bibliometric Citation Analysis, MDPI Open Access Advancing Open Science, Vol. 13 Issue 3.
- 4- Neurons, what is Neuromarketing & How to Use It?, <https://www.neuronsinc.com/insights/neuromarketing#toc-0> (accessed on 28\11\2024)
- 5- Traci Pedersen, (December 2021), All About Functional Magnetic Resonance Imaging (fMRI), Psychcentral, available online at: <https://psychcentral.com/lib/what-is-functional-magnetic-resonance-imaging-fmri>, (accessed on 27\11\2024)
- 6- Mahsa Soufineyestani, Dale Dowling and Arshia Khan, (January 2020), Electroencephalography (EEG) Technology Applications and Available Devices, Applied Sciences published semimonthly online by MDPI. Vol. 10 Issue 21.
- 7- Gregor Strle, Andrej Košir, Urban Burnik, (August 2023), Physiological Signals and Affect as Predictors of Advertising Engagement, This article belongs to the Special Issue Emotion Recognition Based on Sensors (Volume II).
- 8- Laura Dorwart, (June 2023), What Is the Galvanic Skin Response (GSR)?, Very well health, available online at <https://www.verywellhealth.com/galvanic-skin-response-6373883> (accessed on 29\11\2024).
- 9- Mahesh Jangid, Pranjul Paharia, Sumit Srivastava, (May 2019), Video-Based Facial Expression Recognition Using a Deep Learning Approach, In book: Advances in Computer Communication and

- 10- Jonathan Jonathan, Andreas Pangestu Lim, Paoline, Gede Putra Kusuma, Amalia Zahra, (September 2018), Facial Emotion Recognition Using Computer Vision, Conference: 2018 Indonesian Association for Pattern Recognition International Conference (INAPR).
- 11- Irma Puškarević, Uroš Nedeljković, Vladimir Dimovski, Klementina Možina, (November 2016), An eye tracking study of attention to print advertisements: Effects of typeface figuration, *Journal of Eye Movement Research*, Vol. 9 issue 5.
- 12- Shanaz Khan, (September 2024), Eye Tracking Heatmap: Front Row Seats To Your Visitor's Worldview, VWO, available online at <https://vwo.com/blog/eye-tracking-heatmap/> (accessed on 30/11/2024)
- 13- Resonio, Implicit Association Test (IAT) Guide with Examples, available online at <https://www.resonio.com/market-research/implicit-association-test/> (accessed on 1/12/2024)
- 14- Rupali Gill, Jaiteg Singh, (November 2022), A study of neuromarketing techniques for proposing cost effective information driven framework for decision making, *Materials Today Proceedings*, Volume 49, issue 8
- 15- David Juarez, Ana Mengual-Recuerda, Juan Camilo Serna Zuluaga, Vincenzo Corvello, (January 2024), Application of Artificial Intelligence in Neuromarketing to Predict Recipient Behaviour Towards Brand Stimuli, *International Journal of Software Science and Computational Intelligence*, Volume 16, issue 1.
- 16- Saif M. Mohammad, (January 2021), Sentiment analysis: Automatically Detecting Valence, Emotions, and Other Affectual States from Text, In book: *Emotion Measurement*, available online at: https://www.researchgate.net/publication/350981895_Sentiment_analysis_Automatically_Detecting_Valence_Emotions_and_Other_Affectual_States_from_Text (accessed on 3/12/2024)
- 17- Sunita Kumar, (December 2015), Neuromarketing: The New Science of Advertising, *Universal Journal of Management*, Volume 3, issue 12.
- 18- Oleksii M. Skriabin Dmytro B. Sanakoiev Natalia D. Sanakoieva Vita V. Berezenko Yuliia V. Liubchenko, (June 2021), Neurotechnologies in the advertising industry: Legal and ethical aspects, *Innovative Marketing Journal*, Volume 17, issue 12.
- 19- Ankoor Dasgupta, (July 2024), Neuromarketing: A Journey Into the Recipient's Mind, CMSWIRE, available online at <https://www.cmswire.com/digital-marketing/neuromarketing-a-journey-into-the-recipients-mind/> (accessed on 4/12/2024)
- 20- Medium, (November 2024), The Pepsi vs. Cola—Cola Experiment, available online at <https://medium.com/@marketingoal/the-pepsi-vs-cola-cola-experiment-d2234d03dce8> (accessed on 6/12/2024)
- 21- Sam Davis, (November 2023), How Neuroscience Powers Up Packaging Design, available online at <https://www.merca20.com/how-neuroscience-powers-up-packaging-design/> (accessed on 10/12/2024).
- 22- Jennifer Hessler, (November 2011) , From Social Content Ratings to Sentiment Analysis: The cultivation and commodification of affective television engagement, *Journal of Audience & Reception Studies*, Volume 18, Issue 2.
- 23- Sai Prasanna Iyer, Akanksha Aggarwal, (November 2019), The Role of Music in Brand Recall -A Study of Select Two-Wheeler Advertisements, *International Journal of Management, Technology and Engineering*, Volume IX, Issue I.
- 24- Ricardo Faria, (April 2023), The role of neurofeedback in evaluating and improving user experience, Medium, available online at <https://medium.com/@faria.faria9/the-role-of-neurofeedback-in-evaluating-and-improving-user-experience-bfcd0d69da18> (accessed on 10/12/2024)
- 25- Qutiba Amjad Abdul Ghafoor, Mohammed Edan Alkhazraje, (January 2024), Neuromarketing Practices and Their Role in Raising the Efficiency of Marketing Performance -: An Applied Study in the General Company for Cars and Machinery Trade/ Al-Waziria, *International Journal of Experiential Learning & Case Studies*, Volume 8, Issue 2.
- 26- <https://psychcentral.com/lib/what-is-functional-magnetic-resonance-imaging-fmri>
- 27- <https://www.neuroinjuryspecialists.com/diagnostic-testing/electroencephalogram-test-eeg/>
- 28- <https://dribbble.com/shots/4545185-Heart-Beat-Rate-Monitor-App>

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- 29- <https://bio-medical.com/mindfield-esense-skin-response-gsr-sensor-for-iphone-andriod.html>
 - 30- <https://www.mifratech.com/public/blog-page/Facial+Emotion+Recognition+and+Detection>
 - 31- <https://www.openglobalrights.org/how-emotion-recognition-software-strengthens-dictatorships-and-threatens-democracies/>
 - 32- <https://www.bitbrain.com/blog/eye-tracking-devices>
 - 33- <https://www.dreamerux.com/articles/jpmg9emmymg5xpkp4xzg5krskynrl>
 - 34- <https://cloud.army/resources/knowledge-center/implicit-association-tests-for-studying-packaging-design>
 - 35- <https://www.mentimeter.com/blog/business/best-survey-tools-and-software>
 - 36- <https://www.neuronsinc.com/insights/scale-ab-testing-digital-marketing-guide-framework-examples>
 - 37- <https://fastercapital.com/content/Emotional-analytics--Leveraging-Emotional-Analytics-for-Customer-Insights.html>

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