

IMPLICATIONS OF NEURO-MARKETING

Group 7

Presented By :

MUHAMMAD AHMED EHTISHAM
ALI DANISH RIZA
ROHAIL HASSAN SIDDIQUI
ABDULLAH BIN MUHAMMAD
MUHAMMAD AHMED MALIK

24110167
24110154
24110113
24110015
24110309

Agenda

Introduction & Background

3

Literature Review

4

Research Question & Objectives

7

Design & Methodology

8

Data Collection

9

Ethical Considerations in Data Collection

10

Data Analysis

11

Tests and Models

12

Reliability & Validity

12

Limitiations

13

Resources

14

Timescale

15

References

16

Introduction & Background



- Advancements in neuroscience have led to the emergence of neuro marketing, a new field of marketing that utilizes various neuroscientific techniques to understand consumer behavior.
- It combines neuroscience and marketing to study consumer behavior, preferences, and decision-making processes
- The goal is to help companies create more effective advertisements that can better target their audience

Literature Review

Search Strategy:

1. Databases:

- PubMed
- Scopus
- PsycINFO
- Web of Science

2. Search Terms:

- "neuro marketing"
- "neuroscience in advertising"
- "neuroscience and consumer behavior"
- "brain imaging in advertising" and so on

3. Inclusion Criteria:

- English language articles published between 2010 and 2023
- Articles discussing the benefits and/or ethical considerations of incorporating neuro marketing techniques in the advertising industry
- Primary research studies, systematic reviews, and meta-analyses
- Articles from reputable sources such as academic journals, books, and reports

4. Exclusion Criteria:

- Articles published before 2010
- Non-English language articles
- Articles not related to the topic of neuro marketing in advertising
- News articles, opinion pieces, and editorials

This literature review aims to explore the potential benefits and ethical considerations of incorporating neuro marketing techniques in advertising and Offer recommendations for responsible use of these techniques by companies

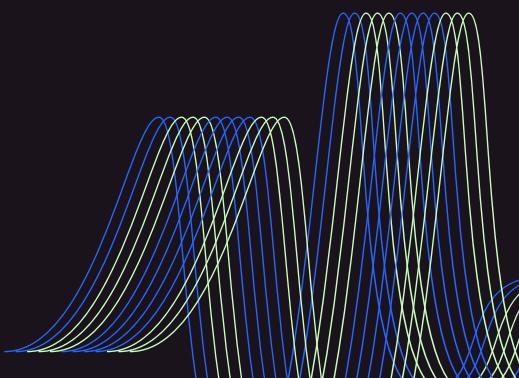




Literature Review

List of studies based that fit our selection criteria (some examples):

- Calvert, G. A., Brammer, M. J., & Iacoboni, M. (2010). Cross-cultural differences in the brain response to consumer product impressions: a deep, but preliminary, issue. *Journal of Consumer Psychology*, 20(1), 139-144.
- de Araujo, I. E., Rolls, E. T., & Velazco, M. I. (2013). Marginal food utility influences food choice depending on culinary experience. *NeuroImage*, 82, 295-304.
- Du Plessis, E. (2010). *The advertised mind: Groundbreaking insights into how our brains respond to advertising*. Sterling, VA: Millward Brown.
- Genco, S., Pohlmann, A., & Steidlmeier, P. (2011). *Neuromarketing for dummies*. John Wiley & Sons.

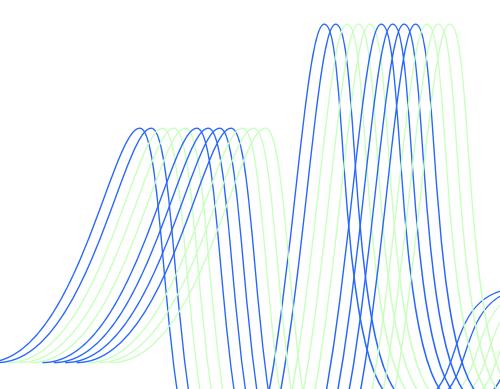




Literature Review

Article Synthesis and Gaps:

- The articles can be broadly classified into two categories: consumer psychology and neuromarketing.
- Limited attention given to ethical concerns and potential for manipulation through neuromarketing techniques
- Need for more research examining how findings from neuromarketing studies can be applied to real-world marketing strategies and tactics
- Limited focus on non-Western cultures
- Lack of attention to ethical concerns
- Limited practical applications



Research Question

"What are the benefits and ethical considerations of incorporating neuro marketing techniques in the advertising industry, and how can companies balance the potential advantages with the ethical concerns associated with these methods?"



Research objectives

CURRENT STATE

What neuro-marketing techniques are being used currently and what advancements are being made in the field

IMPLICATIONS

What are the implications of these techniques on business prosperity and customer privacy

CUSTOMER RESPONSE

What is the perception of customers on these techniques and to what extent do the pros outweigh the cons

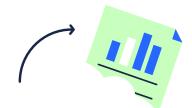
ETHICAL ISSUES

What are the ethical issues arising in the field and how these issues are being tackled with.

Design & Methodology

EXPLORATORY RESEARCH

- Field of neuro-marketing young and developing
- Gain deeper insights
- More effective to cover the aims & objectives of the research
- Discover new information



MIXED-METHOD APPROACH

Quantitative Methods (from customer & business perspective)

- explore causal relationships
- provide proof of correlation
- explore relationship of neuro-marketing techniques and success
- ethical considerations on customer side

Qualitative Methods (from customer & business perspective)

- cementing findings
- gain new insights and information



Data Collection

QUALITATIVE METHODS

1. Surveys (companies)

- specific questions
- gather data on techniques and implications
- data on exact impact and correlation with success

2. Surveys (customers)

- gather data regarding awareness, acceptability

3. Use

- increased diversity and generalizability of research
- substantial audience economically and efficiently
- Likert and Ranking scales
- internal, construct, and content validity questions
- intelligible and consistent

QUANTITATIVE METHODS

1. Sampling

- stratified random sampling
- Four strata, based on perception of ethics of privacy and data sharing
- Include diversity in age
- Brief online questionnaire for stratified sampling

2. Interviews

- major source of information
- extensive and exhaustive
- semi-structured & open-ended
- 20-25 interviews each of approx. 30 minutes
- combination of in-person and online interviews
- recorded to be analysed later
- discussion guide will remain same - improve comparability and reliability

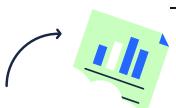
3. Focus Groups

- 5-10 per group
- total of 15 focus groups
- random individuals chosen from each sample

4. Open-ended survey questions

Ethical considerations in data collection

- Maintain a two-way safe environment without jeopardizing the research's legitimacy
 - Uphold the objective standard
 - Ensure participant agreement/consent (informed consent)
 - Plagiarism actively avoided at all steps
 - Ensure that no unethical data management practice takes place
- Refrain from engaging in selective subjectivity - ensure the reliability of the research
- Consent underlines the issue of confidentiality and anonymity. Participant should be fully aware of their rights
- Data breaching and manipulation



Data Analysis

1. Transcription of Interviews & Focus groups

- Records Audio files to be transcribed into individual word-processing files

2. Individual Analysis

- To understand individual perspectives from each participant
- To recognise outlier perspectives that stand out from common themes and may require further inquiry

3. Cross-Analysis

- To group findings into inter-related themes and develop codes based on research's guiding theories

4. Keyword Analysis

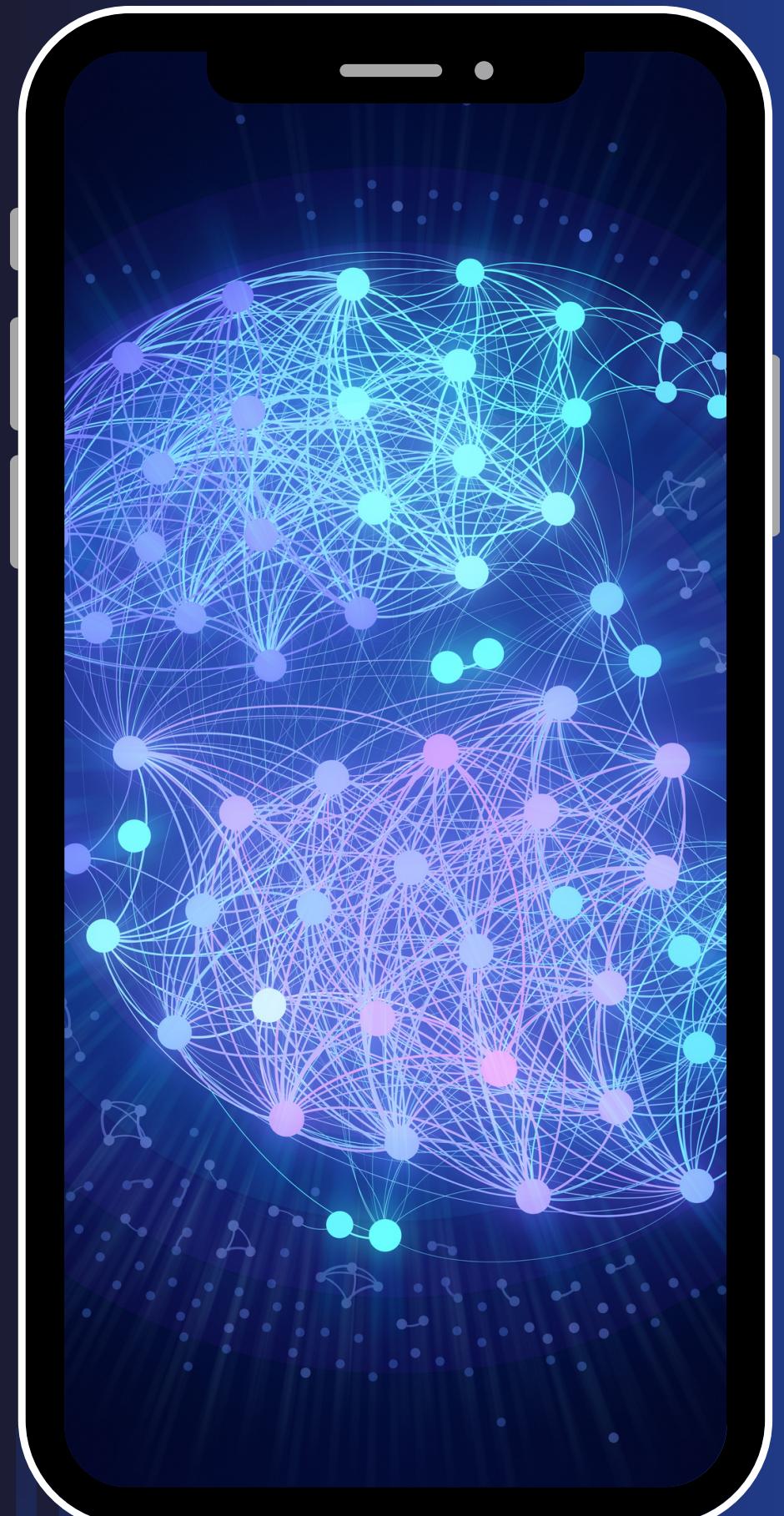
- To Identify common themes across Interview, Focus groups and Quantitative Surveys.

5. Hypothesis Development

- Themes and insights would be used to develop hypotheses and tested with quantitative data.

6. Quantitative Tests

- Cronbach's Alpha Test
- Chi Square & Cramer's V
- Independent Sample T-Test
- Regression Analysis



Quantitative Tests & Data Validity

Cronbach's Alpha Test

- Categorical Data will be gathered using a Likert Scale
- Data will be tested for internal consistency in responses
- Examine consistency across data points and check how interlinked are the data points
- A base alpha value of 0.5 or higher would be required to declare data dependable.

Chi Square & Cramer's V

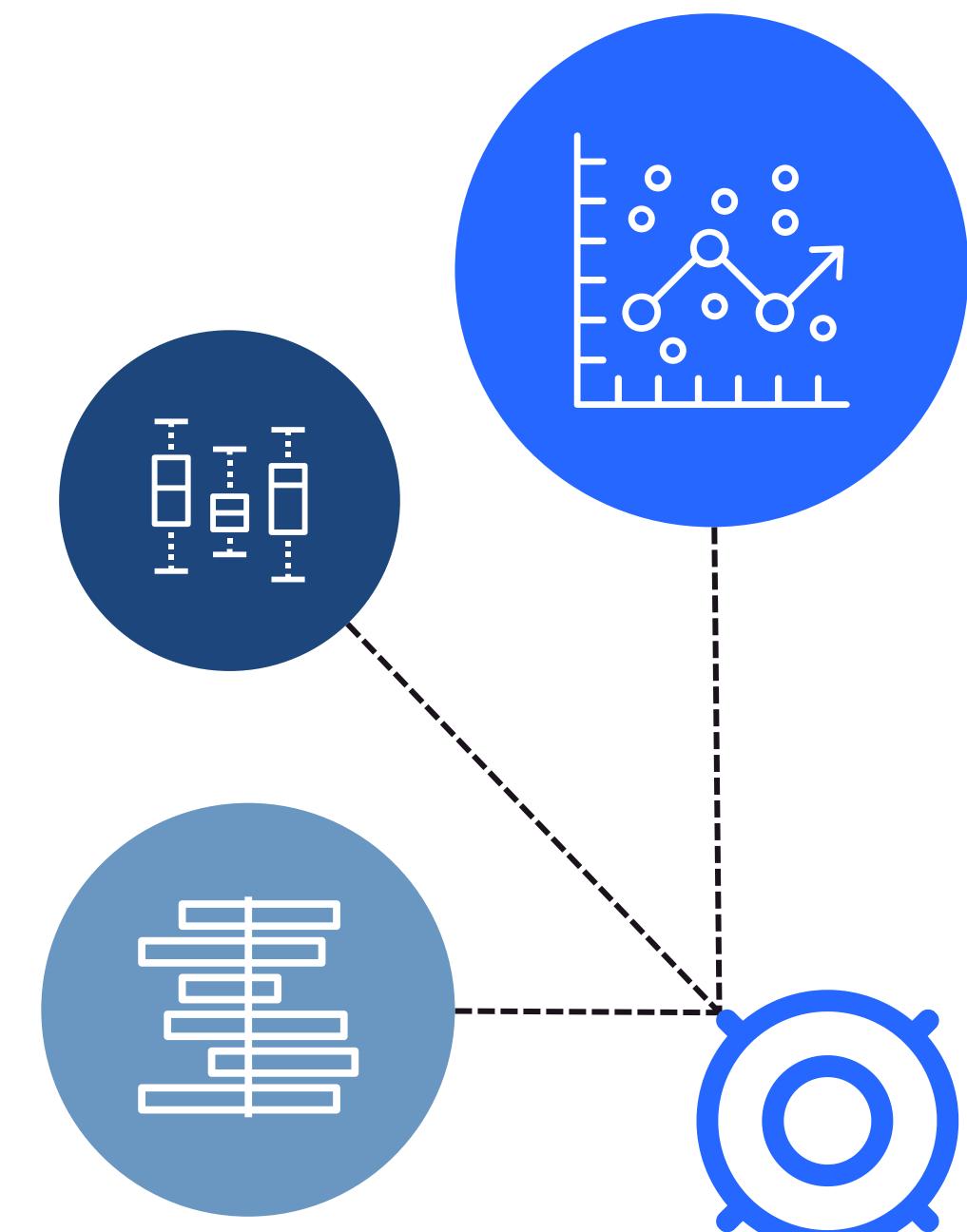
- **Business Perspective:**
 - Success factor of Marketing techniques through profit/sales/market share.
 - Neuro-Marketing Techniques.
 - Firm's Rating of techniques on ethical scale.
- **Consumer Perspective:**
 - Consumer rating of neuro-marketing techniques on ethical scale.
 - Impact of ethical considerations on consumer purchase decisions.

Independent Sample T-Test

- Willingness of consumers to buy a firm's products pre vs post awareness of techniques.
- Ethical Rating of techniques by customers vs by firms.

Regression Analysis

- Multi-Variate regression to test causation after establishing correlation.
- Test and Forecast collective impact on success factor of neuro-marketing techniques while accounting for interaction variables.
- Success Factor will be dependent variable while Impact factors will be independent variables.
- Model's P-Value if less than 0.05 will show significance of impact while R-Square will indicate variation contribution.



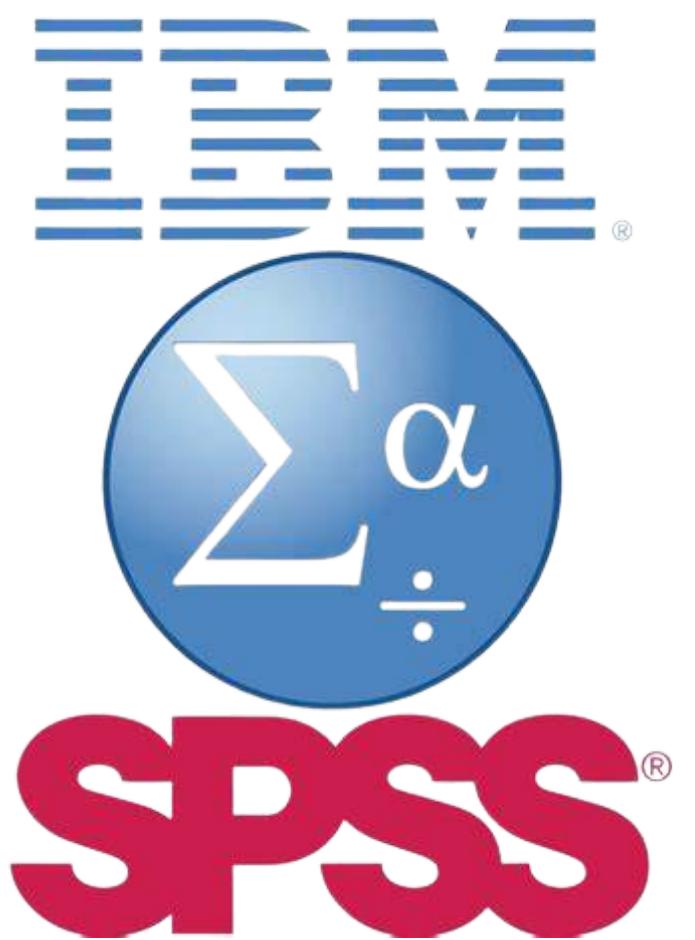
Limitations

- Selection bias
- Self-reporting bias.
- Small sample size
- Sampling frame limitations
- Limited data sources
- Limited geographic coverage
- Time constraints



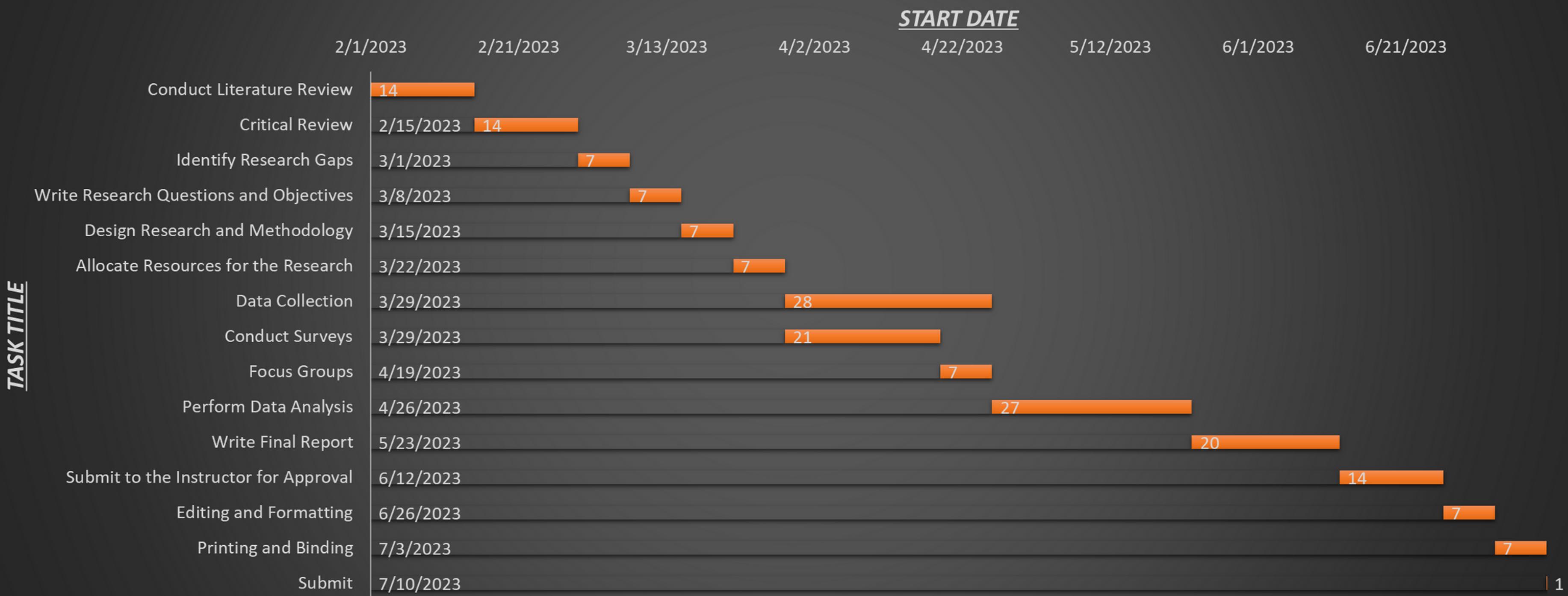
Resources

- Research personnel
- Participants
- Online survey platforms
- Recording equipment
- Transcription services
- Statistical software
- Office supplies
- Research funding



Proposed Timeline

Neuro Marketing Techniques | DISC 320 | Gantt Chart | Group 7



References

- Agarwal, S. and Dutta, T. (2015) “Neuromarketing and consumer neuroscience: Current understanding and the way forward,” DECISION, 42(4), pp. 457–462. Available at: <https://doi.org/10.1007/s40622-015-0113-1>.
- Alsharif, A.H. et al. (2021) “Neuroimaging techniques in advertising research: Main applications, development, and brain regions and processes,” Sustainability, 13(11), p. 6488. Available at: <https://doi.org/10.3390/su13116488>.
- Butler, M.J.R. (2008) “Neuromarketing and the perception of knowledge,” Journal of Consumer Behaviour, 7(4-5), pp. 415–419. Available at: <https://doi.org/10.1002/cb.260>.
- Camerer, C. and Yoon, C. (2015) “Introduction to the journal of marketing research special issue on neuroscience and marketing,” Journal of Marketing Research, 52(4), pp. 423–426. Available at: <https://doi.org/10.1509/0022-2437-52.4.423>.
- Craig, A.W. et al. (2012) “Suspicious minds: Exploring neural processes during exposure to deceptive advertising,” Journal of Marketing Research, 49(3), pp. 361–372. Available at: <https://doi.org/10.1509/jmr.09.0007>.
- Fortunato, V.C., Giraldi, J.D. and De Oliveira, J.H. (2014) “A review of studies on neuromarketing: Practical results, techniques, contributions and limitations,” Journal of Management Research, 6(2), p. 201. Available at: <https://doi.org/10.5296/jmr.v6i2.5446>.

References

- Fugate, D.L. (2007) “Neuromarketing: A layman's look at neuroscience and its potential application to marketing practice,” Journal of Consumer Marketing, 24(7), pp. 385–394. Available at: <https://doi.org/10.1108/07363760710834807>.
- Fugate, D.L. (2008) “Marketing services more effectively with neuromarketing research: A look into the future,” Journal of Services Marketing, 22(2), pp. 170–173. Available at: <https://doi.org/10.1108/08876040810862903>.
- Knutson, B. et al. (2007) “Neural predictors of purchases,” Neuron, 53(1), pp. 147–156. Available at: <https://doi.org/10.1016/j.neuron.2006.11.010>.
- Lee, N., Broderick, A.J. and Chamberlain, L. (2007) “What is ‘neuromarketing’? A discussion and agenda for future research,” International Journal of Psychophysiology, 63(2), pp. 199–204. Available at: <https://doi.org/10.1016/j.ijpsycho.2006.03.007>.
- Madan, C.R. (2010) “Neuromarketing: The next step in market research?,” Eureka, 1(1), pp. 34–42. Available at: <https://doi.org/10.29173/eureka7786>.
- Morin, C. (2011) “Neuromarketing: The New Science of Consumer Behavior,” Society, 48(2), pp. 131–135. Available at: <https://doi.org/10.1007/s12115-010-9408-1>.

References

- Plassmann, H. et al. (2015) “Consumer neuroscience: Applications, challenges, and possible solutions,” *Journal of Marketing Research*, 52(4), pp. 427–435. Available at: <https://doi.org/10.1509/jmr.14.0048>.
- Stanton, S.J., Sinnott-Armstrong, W. and Huettel, S.A. (2016) “Neuromarketing: Ethical Implications of its use and potential misuse,” *Journal of Business Ethics*, 144(4), pp. 799–811. Available at: <https://doi.org/10.1007/s10551-016-3059-0>.
- Venkatraman, V. et al. (2014) “Predicting advertising success beyond traditional measures: New insights from neurophysiological methods and market response modeling,” *SSRN Electronic Journal*, 4, pp. 436–452. Available at: <https://doi.org/10.2139/ssrn.2498095>.
- WILSON, R.M.A.R.K., GAINES, J.E.A.N.N.I.E. and HILL, R.O.N.A.L.D.P.A.U.L. (2008) “Neuromarketing and consumer free will,” *Journal of Consumer Affairs*, 42(3), pp. 389–410. Available at: <https://doi.org/10.1111/j.1745-6606.2008.00114.x>.
- Yoon, C. et al. (2012) “Decision Neuroscience and consumer decision making,” *Marketing Letters*, 23(2), pp. 473–485. Available at: <https://doi.org/10.1007/s11002-012-9188-z>.

THANK YOU!

