

## REFERENCES

- [1] Y. Kim, Y. Jernite, D. Sontag, and A. M. Rush, "Character-aware neural language models." [Online]. Available: [www.aaii.org](http://www.aaii.org)
- [2] T. Mikolov, W.-T. Yih, and G. Zweig, "Linguistic regularities in continuous space word representations," pp. 9–14, 2013. [Online]. Available: <http://research.microsoft.com/en->
- [3] G. Zweig and C. J. C. Burges, "The microsoft research sentence completion challenge," 2011. [Online]. Available: <http://research.microsoft.com/scc/>.
- [4] A. J. Berman and G. B. Pike, "Transverse signal decay under the weak field approximation: Theory and validation," *Magnetic Resonance in Medicine*, vol. 80, 7 2018.
- [5] S. M. Smith, "Fast robust automated brain extraction," *Human Brain Mapping*, vol. 17, 11 2002.
- [6] H. An and W. Lin, "Impact of intravascular signal on quantitative measures of cerebral oxygen extraction and blood volume under normo- and hypercapnic conditions using an asymmetric spin echo approach," *Magnetic Resonance in Medicine*, vol. 50, 10 2003.
- [7] N. P. Blockley and A. J. Stone, "Improving the specificity of r2 to the deoxyhaemoglobin content of brain tissue: Prospective correction of macroscopic magnetic field gradients," *NeuroImage*, vol. 135, 7 2016.
- [8] P. Kundu, S. J. Inati, J. W. Evans, W.-M. Luh, and P. A. Bandettini, "Differentiating bold and non-bold signals in fmri time series using multi-echo epi," *NeuroImage*, vol. 60, 4 2012.
- [9] C. E. Curtis and M. D'Esposito, "Persistent activity in the prefrontal cortex during working memory," pp. 415–423, 9 2003.
- [10] B. Gordon and A. Caramazza, "Lexical decision for open- and closed-class words: Failure to replicate differential frequency sensitivity," *Brain and Language*, vol. 15, 1 1982.
- [11] K. Kroenke, R. L. Spitzer, J. B. Williams, P. O. Monahan, and B. Löwe, "Anxiety disorders in primary care: Prevalence, impairment, comorbidity, and detection," *Annals of Internal Medicine*, vol. 146, 3 2007.
- [12] C. D. Spielberger, R. L. Gorsuch, P. R. Vagg, and G. A. Jacobs, "Manual for the state-trait anxiety inventory," 1983.
- [13] S. C. Schumke, "Unreliability of the dot probe task," *European Journal of Personality*, vol. 19, 12 2005.
- [14] D. Marazziti, G. Consoli, M. Picchetti, M. Carlini, and L. Faravelli, "Cognitive impairment in major depression," *European Journal of Pharmacology*, vol. 626, 1 2010.
- [15] T. C. Eley and J. Stevenson, "Exploring the covariation between anxiety and depression symptoms: A genetic analysis of the effects of age and sex," *Journal of Child Psychology and Psychiatry*, vol. 40, 11 1999.
- [16] S. Hahn, C. Carlson, S. Singer, and S. D. Gronlund, "Aging and visual search: Automatic and controlled attentional bias to threat faces," *Acta Psychologica*, vol. 123, 11 2006.
- [17] K. I. Forster, "Visual perception of rapidly presented word sequences of varying complexity," *Perception Psychophysics*, vol. 8, 7 1970.
- [18] R. L. Spitzer, K. Kroenke, J. B. W. Williams, and B. Löwe, "A brief measure for assessing generalized anxiety disorder," *Archives of Internal Medicine*, vol. 166, 5 2006.
- [19] C. D. Spielberger, "State-trait anxiety inventory," *The Corsini encyclopedia of psychology*, p. 1, 2010.
- [20] H. Wittchen and J. Hoyer, "Generalized anxiety disorder: nature and course," *The Journal of clinical psychiatry*, vol. 62 Suppl 11, pp. 15–9; discussion 20–1, 2001.
- [21] R. B. Cattell and I. H. Scheier, *The meaning and measurement of neuroticism and anxiety*. Ronald, 1961.
- [22] S. Forster, A. O. N. Elizalde, E. Castle, and S. J. Bishop, "Unraveling the anxious mind: Anxiety, worry, and frontal engagement in sustained attention versus off-task processing," *Cerebral Cortex*, vol. 25, 3 2015.
- [23] J. M. Cisler and E. H. Koster, "Mechanisms of attentional biases towards threat in anxiety disorders: An integrative review," *Clinical Psychology Review*, vol. 30, 3 2010.
- [24] E. FOX, R. RUSSO, and G. A. GEORGIOU, "Anxiety modulates the degree of attentive resources required to process emotional faces," *Cognitive, Affective, Behavioral Neuroscience*, vol. 5, 12 2005.
- [25] K. M. Arnell, K. V. Killman, and D. Fijavz, "Blinded by emotion: Target misses follow attention capture by arousing distractors in rspv," *Emotion*, vol. 7, 2007.
- [26] K. Bredemeier, H. Berenbaum, S. B. Most, and D. J. Simons, "Links between neuroticism, emotional distress, and disengaging attention: Evidence from a single-target rspv task," *Cognition Emotion*, vol. 25, 12 2011.
- [27] K. Mogg and B. P. Bradley, "Attentional bias in generalized anxiety disorder versus depressive disorder," pp. 29–45, 2 2005.
- [28] A. N. Tuch, E. E. Presslauer, M. Stöcklin, K. Opwis, and J. A. Bargas-Avila, "The role of visual complexity and prototypicality regarding first impression of websites: Working towards understanding aesthetic judgments," *International Journal of Human-Computer Studies*, vol. 70, 11 2012.
- [29] W. E. Hick, "On the rate of gain of information," *Quarterly Journal of Experimental Psychology*, vol. 4, 3 1952.
- [30] M. Malheiros, "Sign-up or give-up : Exploring user drop-out in web service registration," 2013.
- [31] D. Cyr, M. Head, and H. Larios, "Colour appeal in website design within and across cultures: A multi-method evaluation," *International Journal of Human-Computer Studies*, vol. 68, pp. –, 1 2010.
- [32] Y. Lee and K. A. Kozar, "Understanding of website usability: Specifying and measuring constructs and their relationships," *Decision Support Systems*, vol. 52, 1 2012.
- [33] B. Buxton, *Sketching User Experiences*, 2007.
- [34] L. Faulkner, "Beyond the five-user assumption: Benefits of increased sample sizes in usability testing," *Behavior Research Methods, Instruments, Computers*, vol. 35, 8 2003.
- [35] A. Woolrych and I. Centre, "Why and when five test users aren't enough," 2001.
- [36] B. Shneiderman, "Designing the user interface strategies for effective human-computer interaction," *ACM SIGBIO Newsletter*, vol. 9, p. 6, 1987.
- [37] J. NIELSEN, "Usability heuristics," pp. 115–163, 1993. [Online]. Available: [http://www.useit.com/papers/heuristic/heuristic\\_list.html](http://www.useit.com/papers/heuristic/heuristic_list.html)
- [38] P. M. Fitts, "The information capacity of the human motor system in controlling the amplitude of movement," *Journal of Experimental Psychology*, vol. 47, 1954.
- [39] R. Caddick and S. Cable, *Communicating the User Experience: A Practical Guide for Creating Useful UX Documentation*, 1st ed. Wiley Publishing, 2011. [Online]. Available: <http://www.amazon.com/Communicating-User-Experience-Practical-Documentation/dp/1119971101>
- [40] J. Lazar, J. H. Feng, and H. Hochheiser, "Interviews and focus groups," 2017.
- [41] G. Fischer, "User modeling in human-computer interaction," *User Modeling and User-Adapted Interaction*, vol. 11, 2001.
- [42] J. Preece, H. Sharp, and Y. Rogers, *Interaction Design - Beyond Human-Computer Interaction, Fourth Edition*, 2015, vol. 53.
- [43] D. Eisenberg, S. E. Gollust, E. Golberstein, and J. L. Hefner, "Prevalence and correlates of depression, anxiety, and suicidality among university students," *American Journal of Orthopsychiatry*, vol. 77, 10 2007.
- [44] C. MacLeod, A. Mathews, and P. Tata, "Attentional bias in emotional disorders," *Journal of Abnormal Psychology*, vol. 95, 1986.
- [45] J. Yiend and A. Mathews, "Anxiety and attention to threatening pictures," *The Quarterly Journal of Experimental Psychology Section A*, vol. 54, 8 2001.
- [46] H. Goodwin, J. Yiend, and C. R. Hirsch, "Generalized anxiety disorder, worry and attention to threat: A systematic review," *Clinical Psychology Review*, vol. 54, 6 2017.
- [47] N. Amir, C. Beard, M. Burns, and J. Bomyea, "Attention modification program in individuals with generalized anxiety disorder," *Journal of Abnormal Psychology*, vol. 118, 2009.
- [48] C. MacLeod and A. Mathews, "Anxiety and the allocation of attention to threat," *The Quarterly Journal of Experimental Psychology Section A*, vol. 40, 11 1988.
- [49] H. J. Kelley, "Gradient theory of optimal flight paths," *ARS Journal*, vol. 30, 10 1960.
- [50] D. O. Hebb, *The organization of behavior; a neuropsychological theory*. Wiley, 1949.
- [51] B. Farley and W. Clark, "Simulation of self-organizing systems by digital computer," *Transactions of the IRE Professional Group on Information Theory*, vol. 4, 9 1954.
- [52] W. S. McCulloch and W. Pitts, "A logical calculus of the ideas immanent in nervous activity," *The Bulletin of Mathematical Biophysics*, vol. 5, 12 1943.
- [53] S. Domsch, B. Mürle, S. Weingärtner, J. Zapp, F. Wenz, and L. R. Schad, "Oxygen extraction fraction mapping at 3 tesla using an artificial neural network: A feasibility study," *Magnetic Resonance in Medicine*, vol. 79, 2 2018.
- [54] S. Ogawa, T. M. Lee, A. R. Kay, and D. W. Tank, "Brain magnetic resonance imaging with contrast dependent on blood oxygenation," *Proceedings of the National Academy of Sciences*, vol. 87, 12 1990.
- [55] N. K. Logothetis, J. Pauls, M. Augath, T. Trinath, and A. Oeltermann, "Neurophysiological investigation of the basis of the fmri signal," *Nature*, vol. 412, 7 2001.

- [56] J. O. Eichling, M. E. Raichle, R. L. Grubb, K. B. Larson, and M. M. Ter-Pogossian, "In vivo determination of cerebral blood volume with radioactive oxygen-15 in the monkey," *Circulation Research*, vol. 37, 12 1975.
- [57] G. Williams, "Overdetermined systems of linear equations," *The American Mathematical Monthly*, vol. 97, 6 1990.
- [58] J. V. Hajnal, D. J. Bryant, L. Kasuboski, P. M. Pattany, B. D. Coene, P. D. Lewis, J. M. Pennock, A. Oatridge, I. R. Young, and G. M. Bydder, "Use of fluid attenuated inversion recovery (flair) pulse sequences in mri of the brain," *Journal of Computer Assisted Tomography*, vol. 16, 11 1992.
- [59] Q. X. Yang, G. D. Williams, R. J. Demeure, T. J. Mosher, and M. B. Smith, "Removal of local field gradient artifacts in t2\*-weighted images at high fields by gradient-echo slice excitation profile imaging," *Magnetic Resonance in Medicine*, vol. 39, 3 1998.
- [60] X. He and D. A. Yablonskiy, "Quantitative bold: Mapping of human cerebral deoxygenated blood volume and oxygen extraction fraction: Default state," *Magnetic Resonance in Medicine*, vol. 57, 1 2007.
- [61] W. M. Spees, D. A. Yablonskiy, M. C. Oswood, and J. J. Ackerman, "Water proton mr properties of human blood at 1.5 tesla: Magnetic susceptibility, t1, t2, t2\*, and non-lorentzian signal behavior," *Magnetic Resonance in Medicine*, vol. 45, 4 2001.
- [62] D. Nicoll, C. M. Lu, M. Pignone, and S. J. Mcphee, *Pocket Guide to Diagnostic Tests*, 2002.
- [63] D. A. Yablonskiy and E. M. Haacke, "Theory of nmr signal behavior in magnetically inhomogeneous tissues: The static dephasing regime," *Magnetic Resonance in Medicine*, vol. 32, 12 1994.
- [64] H. An and W. Lin, "Cerebral oxygen extraction fraction and cerebral venous blood volume measurements using mri: Effects of magnetic field variation," *Magnetic Resonance in Medicine*, vol. 47, 5 2002.
- [65] M. Grossman, P. Koenig, G. Glosser, C. DeVita, P. Moore, J. Rhee, J. Detre, D. Alsop, and J. Gee, "Neural basis for semantic memory difficulty in alzheimer's disease: An fmri study," *Brain*, vol. 126, 2003.
- [66] T. Deffieux, C. Demene, M. Pernot, and M. Tanter, "Functional ultrasound neuroimaging: a review of the preclinical and clinical state of the art," 2018.
- [67] S. Hubertus, S. Thomas, J. Cho, S. Zhang, Y. Wang, and L. R. Schad, "Using an artificial neural network for fast mapping of the oxygen extraction fraction with combined qsm and quantitative bold," *Magnetic Resonance in Medicine*, vol. 82, 2019.
- [68] A. J. Stone, N. C. Holland, A. J. Berman, and N. P. Blockley, "Simulations of the effect of diffusion on asymmetric spin echo based quantitative bold: An investigation of the origin of deoxygenated blood volume overestimation," *NeuroImage*, vol. 201, 2019.
- [69] L. A. Stables, R. P. Kennan, and J. C. Gore, "Asymmetric spin-echo imaging of magnetically inhomogeneous systems: Theory, experiment, and numerical studies," *Magnetic Resonance in Medicine*, vol. 40, 1998.
- [70] L. M. Klassen and R. S. Menon, "Nmr simulation analysis of statistical effects on quantifying cerebrovascular parameters," *Biophysical Journal*, vol. 92, 2007.
- [71] M. T. Cherukara, A. J. Stone, M. A. Chappell, and N. P. Blockley, "Model-based bayesian inference of brain oxygenation using quantitative bold," *NeuroImage*, vol. 202, 2019.
- [72] A. J. Stone and N. P. Blockley, "A streamlined acquisition for mapping baseline brain oxygenation using quantitative bold," *NeuroImage*, vol. 147, 2017.