



Daftar Pustaka

- Alyushin, M. V., & Kolobashkina, L. V. (2017). Education technology with continuous real time monitoring of the current functional and emotional students' states. In *AIP Conference Proceedings* (Vol. 1797, No. 1, p. 020001). AIP Publishing LLC.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.).
- Anggraeini, N. (2018). Gambaran tingkat kecemasan pada mahasiswa tingkat tiga D-III Keperawatan dalam menghadapi uji kompetensi di Universitas Pendidikan Indonesia. *Jurnal pendidikan keperawatan indonesia*, 1(2), 131-139.
- Anxiety and Depression Association of America (ADAA). (2022). *Mental Health and College Students*. Diakses di [mental-health-and college students_1.png \(1200×2564\) \(adaa.org\)](https://www.adaa.org/images/mental-health-and-college-students_1.png).
- Arya, L., & Sethia, D. (2022). HRV and GSR as Viable Physiological Markers for Mental Health Recognition. In *2022 14th International Conference on COMmunication Systems & NETworkS (COMSNETS)* (pp. 37-42). IEEE.
- Averill, J. R. (2015). Emotion and anxiety: Sociocultural, biological, and psychological determinants. In *Emotions and Anxiety* (PLE: Emotion) (pp. 99-142). Psychology Press.
- Ayata, D., Yaslan, Y., & Kamaşak, M. (2017). Emotion recognition via galvanic skin response: Comparison of machine learning algorithms and feature extraction methods. *IU-Journal of Electrical & Electronics Engineering*, 17(1), 3147-3156.
- Barlow, D. H., & Durand, V. M. (2014). *Essentials of abnormal psychology* (7th ed.). CENGAGE Learning Custom Publishing.
- Bender, P. K., Reinholdt-Dunne, M. L., Esbjørn, B. H., & Pons, F. (2012). Emotion dysregulation and anxiety in children and adolescents: Gender differences. *Personality and Individual Differences*, 53(3), 284-288.



- Bland, H. W., Melton, B. F., Welle, P., & Bigham, L. (2012). Stress tolerance: New challenges for millennial college students. *College Student Journal*, 46(2), 362-376.
- Bojuwoye, O. (2002). Stressful experiences of first year students of selected universities in South Africa. *Counselling Psychology Quarterly*, 15(3), 277-290.
- Boucsein, W., Fowles, D. C., Grimnes, S., Ben-Shakhar, G., Roth, W. T., ... & Filion, D. L. (2012). Publication recommendations for electrodermal measurements. *Psychophysiology*, 49(8), 1017-1034.
- Bradley, B. F., Brown, S. L., Chu, S., & Lea, R. W. (2009). Effects of orally administered lavender essential oil on responses to anxiety-provoking film clips. *Human Psychopharmacology: Clinical and Experimental*, 24(4), 319-330.
- Campbell, J., & Ehlert, U. (2012). Acute psychosocial stress: does the emotional stress response correspond with physiological responses?. *Psychoneuroendocrinology*, 37(8), 1111-1134.
- Campbell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Acceptability and suppression of negative emotion in anxiety and mood disorders. *Emotion*, 6(4), 587.
- Carl, J. R., Fairholme, C. P., Gallagher, M. W., Thompson-Hollands, J., & Barlow, D. H. (2014). The effects of anxiety and depressive symptoms on daily positive emotion regulation. *Journal of Psychopathology and Behavioral Assessment*, 36(2), 224-236.
- Carthy, T., Horesh, N., Apter, A., & Gross, J. J. (2010). Patterns of emotional reactivity and regulation in children with anxiety disorders. *Journal of Psychopathology and Behavioral Assessment*, 32(1), 23-36.
- Cavallo, F., Semeraro, F., Fiorini, L., Magyar, G., Sinčák, P., & Dario, P. (2018). Emotion modelling for social robotics applications: a review. *Journal of Bionic Engineering*, 15(2), 185-203.
- Centifanti, L., Gillespie, S. M., & Thomson, N. D. (2022). Skin conductance responses to a discrete threat in virtual reality: Associations with psychopathy



- and anxiety. *Journal of psychopathology and behavioral assessment*, 44(1), 39-50.
- Chalmers, J. A., Quintana, D. S., Abbott, M. J. A., & Kemp, A. H. (2014). Anxiety disorders are associated with reduced heart rate variability: a meta-analysis. *Frontiers in psychiatry*, 5, 80.
- Christianto, L. P., Kristiani, R., Franztius, D. N., Santoso, S. D., & Ardani, A. (2020). Kecemasan mahasiswa di masa pandemi Covid-19. *Jurnal Selaras: Kajian Bimbingan Dan Konseling Serta Psikologi Pendidikan*, 3(1), 67-82.
- Cisler, J. M., Olatunji, B. O., Feldner, M. T., & Forsyth, J. P. (2010). Emotion regulation and the anxiety disorders: An integrative review. *Journal of psychopathology and behavioral assessment*, 32(1), 68-82.
- Cita, N. B., & Susantiningsih, T. S. (2020). Dampak pembelajaran jarak jauh dan physical distancing pada tingkat kecemasan mahasiswa. *Journal of Borneo Holistic Health*, 3(1), 58-68.
- Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: psychometric evidence and taxonomic implications. *Journal of abnormal psychology*, 100(3), 316.
- Cotoia, A., Dibello, F., Moscatelli, F., Sciusco, A., Polito, P., Modolo, A., ... & Cinnella, G. (2018). Effects of Tibetan music on neuroendocrine and autonomic functions in patients waiting for surgery: a randomized, controlled study. *Anesthesiology Research and Practice*, 2018.
- Croft, R. J., Gonsalvez, C. J., Gander, J., Lechem, L., & Barry, R. J. (2004). Differential relations between heart rate and skin conductance, and public speaking anxiety. *Journal of behavior therapy and experimental psychiatry*, 35(3), 259-271.
- Damanik, E. D. (2006). *The Measurement of Reliability, Validity, Items Analysis and Normative Data of Depression Anxiety Stress Scale*. Jakarta: Fakultas Psikologi Universitas Indonesia.
- Das, P., Khasnobish, A., & Tibarewala, D. N. (2016). Emotion recognition employing ECG and GSR signals as markers of ANS. In *2016 Conference on Advances in Signal Processing (CASP)* (pp. 37-42). IEEE.



- Egger, M., Ley, M., & Hanke, S. (2019). Emotion recognition from physiological signal analysis: A review. *Electronic Notes in Theoretical Computer Science*, 343, 35-55.
- El-Sheikh, M., Keiley, M., Erath, S., & Dyer, W. J. (2013). Marital conflict and growth in children's internalizing symptoms: the role of autonomic nervous system activity. *Developmental psychology*, 49(1), 92.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), 1-4.
- Fairuzzahra, D. A., Aryandari, D., & Purwadi, M. (2018). Hubungan antara husnudzon dan kecemasan pada mahasiswa. *Jurnal psikologi islam*, 5(2), 69-74.
- Firmansyah, Q. D., Qorahman, W., & Ningtyas, N. W. R. (2022). Hubungan Kecemasan dengan Kualitas Tidur Mahasiswa dalam Penyelesaian Tugas Akhir di Sekolah Tinggi Ilmu Kesehatan Borneo Cendekia Medika. *Jurnal Borneo Cendekia*, 5(2), 148-157.
- Gazzaniga, M. (2015). *Psychological science*: Fifth international student edition. WW Norton & Company.
- Gorman, J. M., & Sloan, R. P. (2000). Heart rate variability in depressive and anxiety disorders. *American heart journal*, 140(4), S77-S83.
- Guo, H. W., Huang, Y. S., Lin, C. H., Chien, J. C., Haraikawa, K., & Shieh, J. S. (2016). Heart rate variability signal features for emotion recognition by using principal component analysis and support vectors machine. In *2016 IEEE 16th international conference on bioinformatics and bioengineering (BIBE)* (pp. 274-277). IEEE.
- Guo, R., Li, S., He, L., Gao, W., Qi, H., & Owens, G. (2013). Pervasive and unobtrusive emotion sensing for human mental health. In *2013 7th International Conference on Pervasive Computing Technologies for Healthcare and Workshops* (pp. 436-439). IEEE.
- Hapsery, A., & Lubis, R. R. A. (2019). Penggunaan Metode Stepwise pada Pemodelan Perencanaan Track Quality Index (TQI) untuk Kereta Api



- Semicepat Indonesia. *MUST: Journal of Mathematics Education, Science and Technology*, 4(1), 114-122.
- Hasanah, U., Ludiana, I., & PH, L. (2020). Gambaran psikologis mahasiswa dalam proses pembelajaran selama pandemi COVID-19. *Jurnal Keperawatan Jiwa*, 8(3), 299-306.
- Heuer, H. (2007). Control of the dominant and nondominant hand: exploitation and taming of nonmuscular forces. *Experimental brain research*, 178(3), 363-373.
- Hu, M. X., Lamers, F., de Geus, E. J., & Penninx, B. W. (2016). Differential autonomic nervous system reactivity in depression and anxiety during stress depending on type of stressor. *Psychosomatic medicine*, 78(5), 562-572.
- Hughes, J. W., & Stoney, C. M. (2000). Depressed mood is related to high-frequency heart rate variability during stressors. *Psychosomatic medicine*, 62(6), 796-803.
- Jauhary, A. (2021). *Kemenkes: Angka gangguan kecemasan naik 6,8 persen selama pandemi*. Diakses pada tanggal 20 Juli 2022 di <https://www.antaranews.com/berita/2444893/kemenkes-angka-gangguan-kecemasan-naik-68-persen-selama-pandemi>.
- Jiang, B., Chang, C. Y., & Sullivan, W. C. (2014). A dose of nature: Tree cover, stress reduction, and gender differences. *Landscape and Urban Planning*, 132, 26-36.
- Kalat, J. W. (2015). Biological psychology. *Cengage Learning*.
- Kawachi, I., Colditz, G. A., Ascherio, A., Rimm, E. B., Giovannucci, E., Stampfer, M. J., & Willett, W. C. (1994). Prospective study of phobic anxiety and risk of coronary heart disease in men. *Circulation*, 89(5), 1992-1997.
- Kenney, M. J., & Ganta, C. K. (2014). Autonomic nervous system and immune system interactions. *Comprehensive physiology*, 4(3), 1177.\
- Kensinger, E. A. (2004). Remembering emotional experiences: The contribution of valence and arousal. *Reviews in the Neurosciences*, 15(4), 241-252.
- Krämer, M., Seefeldt, W. L., Heinrichs, N., Tuschen-Caffier, B., Schmitz, J., Wolf, O. T., & Blechert, J. (2012). Subjective, autonomic, and endocrine reactivity



- during social stress in children with social phobia. *Journal of abnormal child psychology*, 40(1), 95-104.
- Lader, M. H. (1967). Palmar skin conductance measures in anxiety and phobic states. *Journal of psychosomatic research*, 11(3), 271-281.
- LaGrandeur, K. (2015). Emotion, artificial intelligence, and ethics. In *Beyond artificial intelligence* (pp. 97-109). Springer, Cham.
- Levenson, R. W. (2014). The autonomic nervous system and emotion. *Emotion review*, 6(2), 100-112.
- Leyro, T. M., Buckman, J. F., & Bates, M. E. (2019). Theoretical implications and clinical support for heart rate variability biofeedback for substance use disorders. *Current opinion in psychology*, 30, 92-97.
- Licht, C. M., De Geus, E. J., Van Dyck, R., & Penninx, B. W. (2009). Association between anxiety disorders and heart rate variability in The Netherlands Study of Depression and Anxiety (NESDA). *Psychosomatic medicine*, 71(5), 508-518.
- Licht, C. M., Penninx, B. W., & De Geus, E. J. (2012). Effects of antidepressants, but not psychopathology, on cardiac sympathetic control: a longitudinal study. *Neuropsychopharmacology*, 37(11), 2487-2495.
- Lin, Y., Durbin, J. M., & Rancer, A. S. (2017). Perceived instructor argumentativeness, verbal aggressiveness, and classroom communication climate in relation to student state motivation and math anxiety. *Communication Education*, 66(3), 330-349.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour research and therapy*, 33(3), 335-343.
- MacIntyre, P. D., & Vincze, L. (2017). Positive and negative emotions underlie motivation for L2 learning. *Studies in Second Language Learning and Teaching*, 7(1), 61-88.



- MacIntyre, V. A., MacIntyre, P. D., & Carre, G. (2010). Heart rate variability as a predictor of speaking anxiety. *Communication research reports*, 27(4), 286-297.
- Mahmoud, J. S. R., Staten, R. T., Hall, L. A., & Lennie, T. A. (2012). The relationship among young adult college students' depression, anxiety, stress, demographics, life satisfaction, and coping styles. *Issues in mental health nursing*, 33(3), 149-156.
- Markiewicz, R., Markiewicz-Gospodarek, A., & Dobrowolska, B. (2022). Galvanic Skin Response Features in Psychiatry and Mental Disorders: A Narrative Review. *International Journal of Environmental Research and Public Health*, 19(20), 13428.
- Mennin, D. S., Heimberg, R. G., Turk, C. L., & Fresco, D. M. (2005). Preliminary evidence for an emotion dysregulation model of generalized anxiety disorder. *Behaviour research and therapy*, 43(10), 1281-1310.
- Miu, A. C., Heilman, R. M., & Miclea, M. (2009). Reduced heart rate variability and vagal tone in anxiety: trait versus state, and the effects of autogenic training. *Autonomic Neuroscience*, 145(1-2), 99-103.
- Montagu, J. D., & Coles, E. M. (1966). Mechanism and measurement of the galvanic skin response. *Psychological Bulletin*, 65(5), 261.
- Nisa'minhad, K., Ali, S. H. M., & Reaz, M. B. I. (2017). A design framework for human emotion recognition using electrocardiogram and skin conductance response signals. *Journal of Engineering Science and Technology*, 12(11), 3102-3119.
- Noviyanti, A. (2021). Dinamika Kecemasan Karir Pada Mahasiswa Tingkat Akhir. *KoPeN: Konferensi Pendidikan Nasional*, 3(2), 46-59.
- Nummenmaa, L., Glerean, E., Hari, R., & Hietanen, J. K. (2014). Bodily maps of emotions. *Proceedings of the National Academy of Sciences*, 111(2), 646-651.
- Nunan, D., Sandercock, G. R., & Brodie, D. A. (2010). A quantitative systematic review of normal values for short-term heart rate variability in healthy adults. *Pacing and clinical electrophysiology*, 33(11), 1407-1417.



- Octasya, T., & Munawaroh, E. (2021). Level of academic stress for students of guidance and counseling at Semarang State University during the pandemic. *ProGCouns: Journal of Professionals in Guidance and Counseling*, 2(1).
- Phan, K. L., Fitzgerald, D. A., Nathan, P. J., & Tancer, M. E. (2006). Association between amygdala hyperactivity to harsh faces and severity of social anxiety in generalized social phobia. *Biological psychiatry*, 59(5), 424-429.
- Phillips, A. C., Hunt, K., Der, G., & Carroll, D. (2011). Blunted cardiac reactions to acute psychological stress predict symptoms of depression five years later: evidence from a large community study. *Psychophysiology*, 48(1), 142-148.
- Pinna, G. D., Maestri, R., Torunski, A., Danilowicz-Szymanowicz, L., Szwoch, M., La Rovere, M. T., & Raczak, G. (2007). Heart rate variability measures: a fresh look at reliability. *Clinical Science*, 113(3), 131-140.
- Posner, J., Russell, J. A., & Peterson, B. S. (2005). The circumplex model of affect: An integrative approach to affective neuroscience, cognitive development, and psychopathology. *Development and psychopathology*, 17(3), 715-734.
- Raheel, A., Majid, M., Alnowami, M., & Anwar, S. M. (2020). Physiological sensors based emotion recognition while experiencing tactile enhanced multimedia. *Sensors*, 20(14), 4037.
- Rahmadiana, M., Karyotaki, E., Passchier, J., Cuijpers, P., van Ballegooijen, W., Wimbarti, S., & Riper, H. (2019). Guided internet-based transdiagnostic intervention for Indonesian university students with symptoms of anxiety and depression: A pilot study protocol. *Internet interventions*, 15, 28-34.
- Rahmanto, S. W., & Kuncoro, J. (2021). Hubungan Antara Efikasi Diri Dan Kesiapan Kerja Dengan Kecemasan Menghadapi Dunia Kerja Pada Mahasiswa Tingkat Akhir Di Universitas Islam Sultan Agung Semarang. *Prosiding Konstelasi Ilmiah Mahasiswa Unissula (KIMU) Klaster Humaniora*.
- Ratnaningtyas, T. O., & Fitriani, D. (2020). Hubungan kecemasan dengan kualitas tidur pada mahasiswa tingkat akhir. *Edu Masda Journal*, 4(1), 21-31.



- Ridwan, M., Kusuma, W. A., & Wibowo, H. (2020). Pengukuran emosi berdasarkan biofeedback sensor pada game berjenis battle royale. *Jurnal Repositor*, 2(11), 1464-1473.
- Rosebrock, L. E., Hoxha, D., Norris, C., Cacioppo, J. T., & Gollan, J. K. (2016). Skin conductance and subjective arousal in anxiety, depression, and comorbidity. *Journal of Psychophysiology*.
- Rudiansyah, R., Amirullah, A., & Yunus, M. (2016). Upaya guru dalam mengatasi kecemasan siswa dalam menghadapi tes (pencapaian hasil belajar) siswa di SMP Negeri 3 Banda Aceh. *Jurnal Ilmiah Mahasiswa Pendidikan Kewarganegaraan*, 1(1).
- Russell, J. A. (1980). A circumplex model of affect. *Journal of personality and social psychology*, 39(6), 1161.
- Sanchez-Comas, A., Synnes, K., Molina-Estren, D., Troncoso-Palacio, A., & Comas-González, Z. (2021). Correlation analysis of different measurement places of galvanic skin response in test groups facing pleasant and unpleasant stimuli. *Sensors*, 21(12), 4210.
- Santosa, D. A. (2022). Hubungan dukungan sosial terhadap kecemasan dan kecenderungan depresi pada lulusan sarjana yang menganggur. *Skripsi*. Yogyakarta: Universitas Gadjah Mada.
- Sari, H. K. (2021). A Study on Emotion Classification Method Based on Bio-Parameters Data Measurement by Random Forest Algorithm. *Thesis*. Yogyakarta: Gadjah Mada University.
- Sarstedt, M., & Mooi, E. (2019). Regression Analysis. In: *A Concise Guide to Market Research. Springer Texts in Business and Economics*. Springer, Berlin, Heidelberg.
- Schirmer, A. (2014). *Emotion*. Sage Publications.
- Scott, K. M., De Jonge, P., Alonso, J., Viana, M. C., Liu, Z., O'Neill, S., ... & Kessler, R. C. (2013). Associations between DSM-IV mental disorders and subsequent heart disease onset: beyond depression. *International journal of cardiology*, 168(6), 5293-5299.



- Seldenrijk, A., Vogelzangs, N., Batelaan, N. M., Wieman, I., van Schaik, D. J., & Penninx, B. J. (2015). Depression, anxiety and 6-year risk of cardiovascular disease. *Journal of psychosomatic research*, 78(2), 123-129.
- Setiyani, R. Y. (2018). Perbedaan Tingkat Kecemasan Pada Mahasiswa Baru Di Fakultas Ilmu Kesehatan Dan Non Fakultas Ilmu Kesehatan, Universitas ‘Aisyiyah Yogyakarta. *Jurnal Psikologi Integratif*, 6(1), 16-28.
- Setyohadi, D. B., Kusrohmaniah, S., Gunawan, S. B., & Pranowo, P. (2018). Galvanic skin response data classification for emotion detection. *International Journal of Electrical and Computer Engineering (IJECE)*, 8(5), 31-41.
- Shaffer, F., & Ginsberg, J. P. (2017). An overview of heart rate variability metrics and norms. *Frontiers in public health*, 258.
- Shinba, T. (2014). Altered autonomic activity and reactivity in depression revealed by heart-rate variability measurement during rest and task conditions. *Psychiatry and Clinical Neurosciences*, 68(3), 225-233.
- Spielberger, C. D., Gorsuch, R. L., Lushene, P. R., Vagg, P. R., & Jacobs, A. G. Consulting Psychologists Press, Inc; (1983). *Manual for the State-Trait Anxiety Inventory (STAI Form Y)*. Consulting Psychologists Palo Alto.
- Suseno, B. (2020). Efek Restoratif Lingkungan Simulasi (Virtual Reality & Video 2D) dalam Menurunkan Stres. *Skripsi*. Yogyakarta: Universitas Gadjah Mada.
- Thomas, K. M., Drevets, W. C., Dahl, R. E., Ryan, N. D., Birmaher, B., Eccard, C. H., ... & Casey, B. J. (2001). Amygdala response to fearful faces in anxious and depressed children. *Archives of general psychiatry*, 58(11), 1057-1063.
- Thought Technology Ltd, & Beauchamp. (2017). Peak Performance Suite Reference Manual. Retrieved from <http://www.thoughttechnology.com/pdf/manuals/SA8021%20Peak%20Performance%20Suite%20Reference%20Manual.pdf>.
- Tremayne, P., & Barry, R. J. (2001). Elite pistol shooters: physiological patterning of best vs. worst shots. *International journal of psychophysiology*, 41(1), 19-29.



- Turk, C. L., Heimberg, R. G., Luterek, J. A., Mennin, D. S., & Fresco, D. M. (2005). Emotion dysregulation in generalized anxiety disorder: A comparison with social anxiety disorder. *Cognitive Therapy and Research*, 29(1), 89-106.
- Vehovar, V., Toepoel, V., & Steinmetz, S. (2016). *Non-probability sampling*. The Sage handbook of survey methods, 329-345.
- Wahyuni, A. F., Widyastuti, W., & Dewi, E. M. P. (2016). Pengaruh Pelatihan Yoga Terhadap Peningkatan Afek Positif Remaja Perempuan Di Panti Asuhan Kota Makassar. *Skripsi*. Universitas Negeri Makassar.
- Walean, C. J., Pali, C., & Sinolungan, J. S. (2021). Gambaran tingkat kecemasan pada mahasiswa di masa pandemi Covid-19. *Jurnal Biomedik: JBM*, 13(2), 132-143.
- Watkins, L. L., Grossman, P., Krishnan, R., & Sherwood, A. (1998). Anxiety and vagal control of heart rate. *Psychosomatic medicine*, 60(4), 498-502.
- Watson, & Clark, L. A. (1994). The PANAS-X: Manual for the Positive and Negative Affect Schedule - Expanded Form. *Iowa Research Online*. <https://doi.org/10.17077/48vt-m4t2>
- Watson, D., Clark, L. A., & Carey, G. (1988). Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of abnormal psychology*, 97(3), 346.
- Watson, J. P., & Marks, I. M. (1971). Relevant and irrelevant fear in flooding—A crossover study of phobic patients. *Behavior Therapy*, 2(3), 275-293.
- Wei, W., Jia, Q., Feng, Y., & Chen, G. (2018). Emotion recognition based on weighted fusion strategy of multichannel physiological signals. *Computational intelligence and neuroscience*, 2018.
- Wohon, S. C., Hatidja, D., & Nainggolan, N. (2017). Penentuan model regresi Terbaik dengan menggunakan metode stepwise (Studi kasus: Impor beras di Sulawesi Utara). *Jurnal Ilmiah Sains*, 17(2), 80-88.
- Zeidner, M. (2014). Anxiety in education. In *International handbook of emotions in education* (pp. 275-298). Routledge.



- Zeman, J., Cassano, M., Perry-Parrish, C., & Stegall, S. (2006). Emotion regulation in children and adolescents. *Journal of Developmental & Behavioral Pediatrics*, 27(2), 155-168.
- Zhang, J., Yin, Z., Chen, P., & Nichele, S. (2020). Emotion recognition using multi-modal data and machine learning techniques: A tutorial and review. *Information Fusion*, 59, 103-126.