

## DAFTAR PUSTAKA

- Aboras, M., Amasha, H., dan Ibraheem, I., 2015, Early detection of melanoma using multispectral imaging and artificial intelligence techniques: [Http://Www.Sciencepublishinggroup.Com](http://www.sciencepublishinggroup.com), v. 3, p. 29–33, doi:10.11648/j.ajbls.s.2015030203.16.
- Ayundyahrini, M., Purwanto, E.H., Lukiawan, R., dan Setyoko, A.T., 2020, Kebutuhan Standar Teknologi Hiperspektral Dan Kesiapan Teknologinya Di Indonesia: Jurnal Standardisasi, v. 22, p. 211, doi:10.31153/js.v22i3.844.
- Beck, R., 2003, EO-1 User Guide v. 2.3: , p. 74.
- Breiman, L., 1996, Bagging predictors: *machine learning*, v. 24, p. 123–140, doi:10.3390/risks8030083.
- Breiman, L., 2001, *random forest: machine learning*, p. 5–32, doi:10.1109/ICCECE51280.2021.9342376.
- Buxton, M.W.N.M., 2017, Infrared detection of ore variability that influences the environmental risks during perlite mining and processing:, doi:10.1007/s12665-017-7074-y.
- Carranza, E.J.M., dan Laborte, A.G., 2015, *random forest* predictive modeling of mineral prospectivity with small number of prospects and data with missing values in Abra (Philippines): Computers and Geosciences, v. 74, p. 60–70, doi:10.1016/j.cageo.2014.10.004.
- Carretero, M.I., dan Pozo, M., 2009, Clay and non-clay minerals in the pharmaceutical industry. Part I. Excipients and medical applications: Applied Clay Science, v. 46, p. 73–80, doi:10.1016/j.clay.2009.07.017.
- Chutia, D., Borah, N., Baruah, D., Bhattacharyya, D.K., Raju, P.L.N., dan Sarma, K.K., 2019, An effective approach for improving the accuracy of a *random forest* classifier in the classification of Hyperion data: Applied Geomatics, v. 12, p. 95–105, doi:10.1007/s12518-019-00281-8.
- Clark, R.N., Raymond F, K.G.A.S., Livo, K.E., Todd M. Hoefen, Neil C. Pearson, Richard A. Wise, W.M.B., dan Heather A. Lowers, Rhonda L. Driscoll, and A.J.K., 2017, USGS Spectral Library Version 7: 141–143 p., doi:10.1111/j.1467-9310.1980.tb01113.x.
- Cloutier, J., Piercey, S.J., Al, V.I., dan Al, V.I., 2021, Mineralogy , Mineral Chemistry and SWIR Spectral Reflectance of chlorite and White Mica:
- Cloutis, E.A., Asher, P.M., dan Mertzman, S.A., 2002, Spectral reflectance properties of zeolites and *remote sensing* implications: Journal of Geophysical Research: Planets, v. 107, doi:10.1029/2000je001467.
- Connolly, J.R., 2005, Introduction to X-ray Powder Diffraction: , p. 1–9.
- Daly, T., Gavin, P., dan Chevrier, V., 2011, Effects of Thermal Alteration on the Near-Infrared and Mid-Infrared Spectra of Martian Phyllosilicates: 42nd Lunar and Planetary Science Conference, p. 1164.
- Davies, R.J., Swarbrick, R.E., Evans, R.J., dan Huuse, M., 2007, Birth of a mud volcano: East Java, 29 May 2006: GSA Today, v. 17, p. 4–9, doi:10.1130/GSAT01702A.1.
- El-Nahry, A.H., dan Altinbas, U., 2006, Processing and analyzing advanced hyperspectral imagery data: Remote Sensing for Agriculture, Ecosystems, and Hydrology VIII, v. 6359, p. 63590F, doi:10.1117/12.687148.

- Elgamouz, A., Tijani, N., Shehadi, I., Hasan, K., dan Al-Farooq Kawam, M., 2019, Characterization of the firing behaviour of an illite-kaolinite clay mineral and its potential use as membrane support: *Heliyon*, v. 5, p. e02281, doi:10.1016/j.heliyon.2019.e02281.
- Farahidy, I., Sadly, M., Kristijono, A., Sanjaya, H., dan Frederik, M., 2005, Application of Hyperspectral Technology in Indonesia : Overview on Bppt Hyperspectral Program: Pertemuan Ilmiah Tahunan MAPIN XIV, p. TIS-329-TIS-336.
- Franto, F., Pramumijoyo, S., dan Setijadji, D., 2018, Jauh Dan Sig Pada Eksplorasi Endapan Mineral ( Sebuah Rangkuman ):
- Gewali, U.B., Monteiro, S.T., dan Saber, E., 2019, *machine learning* based hyperspectral image analysis : A survey:
- Gholamy, A., Kreinovich, V., dan Kosheleva, O., 2018, Why 70/30 Or 80/20 Relation Between Training And Testing Sets : A Pedagogical Explanation: Departmental Technical Reports (CS), v. 1209, p. 1–6.
- Gunradi, R., dan Suprpto, S.J., 2007, Penelitian Endapan Lumpur Di Daerah Porong Kabupaten Sidoarjo Provinsi Jawa Timur: Proceeding Pemaparan Hasil Kegiatan Lapangan Dan Non Lapangan Tahun 2007 Pusat Sumber Daya Geologi,.
- <https://aviris.jpl.nasa.gov/> ENVI Tutorial - Advanced Hyperspectral Analysis: , p. 1–11, <https://aviris.jpl.nasa.gov/>.
- Hu, B., Wan, B., Xu, Y., Tao, L., Wu, X., Qiu, Q., Wu, Y., dan Deng, H., 2019, Mapping hydrothermally altered minerals with AST\_07XT, AST\_05 and Hyperion datasets using a voting-based extreme learning machine algorithm: *Ore Geology Reviews*, v. 114, p. 103116, doi:10.1016/j.oregeorev.2019.103116.
- Istadi, B., T., H., Sunardi, E., Hadi, S., dan Sawolo, N., 2012, Mud Volcano and Its Evolution: *Earth Sciences*, doi:10.5772/24944.
- Kishore, K.M.S., Behera, M.K., Chakravarty, S., dan Dash, S., 2020, Hyperspectral Image Classification using Minimum *Noise* Fraction and *random forest*: Proceedings of 2020 IEEE International Women in Engineering (WIE) Conference on Electrical and Computer Engineering, WIECON-ECE 2020, p. 296–299, doi:10.1109/WIECON-ECE52138.2020.9397972.
- Kruse, F.A., 2007, Regional mineral mapping by extending hyperspectral signatures using multispectral data: *IEEE Aerospace Conference Proceedings*, doi:10.1109/AERO.2007.353059.
- Leitner, J., Vollmer, C., King, A.J., Schofield, P.F., Mosselmans, J.F.W., dan Hoppe, P., 2019, Spectral Properties of Alunite-Kaolinite Mixtures and Detection of These Minerals at Mawrth Vallis.: v. 2019, p. 2–3.
- Li, H.-C., dan Chang, C.-I., 2016, Real-time hyperspectral anomaly detection via *band-interleaved* by line: *Remotely Sensed Data Compression, Communications, and Processing XII*, v. 9874, p. 98740H, doi:10.1117/12.2228246.
- Lowe, B., dan Kulkarni, A., 2015, Multispectral Image Analysis Using *random forest*: *International Journal on Soft Computing*, v. 6, p. 1–14, doi:10.5121/ijsc.2015.6101.

- Mazzini, A., Svensen, H., Akhmanov, G.G., Aloisi, G., Planke, S., Malthe-Sørenssen, A., dan Istadi, B., 2007, Triggering and dynamic evolution of the LUSI mud volcano, Indonesia: *Earth and Planetary Science Letters*, v. 261, p. 375–388, doi:10.1016/j.epsl.2007.07.001.
- Murray, H.H., 1961, *Industrial Applications of Kaolin*: Georgia Kaolin Company, p. 137–143, doi:10.1017/cbo9780511600586.023.
- Muwaffiqih, M.I., Nugraha, W.A., Lubis, I.F., dan Novian, M.I., 2021, Stratigraphy of Kendeng Zone in Miyono Village and Surrounding, Sekar District, Bojonegoro Regency, East Java, Indonesia: *Journal of Applied Geology*, v. 6, p. 17, doi:10.22146/jag.54199.
- Portela, B., Sepp, M.D., Ruitenbeek, F.J.A. van, Hecker, C., dan Dilles, J.H., 2021, Using hyperspectral imagery for identification of pyrophyllite-muscovite intergrowths and alunite in the shallow epithermal environment of the Yerington porphyry copper district: *Ore Geology Reviews*, v. 131, p. 104012, doi:10.1016/j.oregeorev.2021.104012.
- Preidl, S., dan Doktor, D., 2021, Comparison of radiative transfer model inversions to estimate vegetation physiological status based on hyperspectral data: *Workshop on Hyperspectral Image and Signal Processing, Evolution in Remote Sensing*, doi:10.1109/WHISPERS.2011.6080936.
- Radford, D.D.G., Cracknell, M.J., Roach, M.J., dan Cumming, G. V., 2018, Geological Mapping in Western Tasmania Using Radar and *random forests*: *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, v. 11, p. 3075–3087, doi:10.1109/JSTARS.2018.2855207.
- Ramadhan Kete, S.C., Suprihatin, Tarigan, S.D., dan Effendi, H., 2019, Land use classification based on object and pixel using Landsat 8 OLI in Kendari City, Southeast Sulawesi Province, Indonesia: *IOP Conference Series: Earth and Environmental Science*, v. 284, doi:10.1088/1755-1315/284/1/012019.
- Ramakrishnan, D., dan Bharti, R., 2015, *Hyperspectral remote sensing and geological applications*: *Current Science*, v. 108, p. 879–891.
- Satyana, A.H. and A., 2008, Satyana., 2008, Mud Diapirs and Mud Volcanoes in Depressions of Java to Madura : Origins, Natures, and Implications to Petroleum System: *Proceedings Indonesian Petroleum Association ThirtySecond Annual Convention & Exhibition*, v. 2, p. 1–34.
- Satyana, A.H., dan Armandita, C., 2004, Deepwater plays of Java, Indonesia: regional evaluation on opportunities and risks:, doi:10.29118/ipa.1341.293.319.
- Sawolo, N., Sutriyono, E., Istadi, B.P., dan Darmoyo, A.B., 2009, The LUSI mud volcano triggering controversy: Was it caused by drilling? *Marine and Petroleum Geology*, v. 26, p. 1766–1784, doi:10.1016/j.marpetgeo.2009.04.002.
- Schneider, S., Melkumyan, A., Murphy, R.J., dan Nettleton, E., 2010, Gaussian Processes with OAD covariance function for hyperspectral data classification: *Proceedings - International Conference on Tools with Artificial Intelligence, ICTAI*, v. 1, p. 393–400, doi:10.1109/ICTAI.2010.63.
- Schulze, D., 2005, Clay minerals: *Encyclopedia of Earth Sciences Series*, p. 1–11, doi:10.1007/978-3-319-39193-9\_51-1.

- Setiadi, I., Darmawan, A., dan Marjiyono, 2016, Pendugaan Struktur Geologi Bawah Permukaan Daerah Terdampak Lumpur Sidoarjo (Lusi) Berdasarkan Analisis Data Geomagnet: Jurnal Lingkungan dan Bencana Geologi, v. 7, p. 125–134, <http://jlbgeologi.esdm.go.id/index.php/jlbgeologi/article/view/103/100>.
- Shaw, G., dan Manolakis, D., 2002, Signal processing for hyperspectral image exploitation: IEEE Signal Processing Magazine, v. 19, p. 12–16, doi:10.1109/79.974715.
- Shirmard, H., Farahbakhsh, E., Müller, R.D., dan Chandra, R., 2022, A review of *machine learning* in processing *remote sensing* data for mineral exploration: Remote Sensing of Environment, v. 268, p. 112750, doi:10.1016/j.rse.2021.112750.
- Society, T.R., 2017, *machine learning* : the power and promise of computers that learn by example: v. 66, 125 p.
- Sribudiyani, Muchsin, N., Ryacudu, R., dan Prasetya, I., 2003, The Collision of the East Java Microplate and Its Implication for Hydrocarbon Occurrences in the East Java Basin:, doi:10.29118/ipa.1530.03.g.085.
- Suprpto, S.J., Gunradi, R., dan Ramli, Y.R., 2007, Geokimia Sebaran Unsur Logam Pada Endapan Lumpur Sidoarjo: Buletin Sumber Daya Geologi, v. 2, p. 4–13, doi:10.47599/bsdg.v2i2.209.
- Vignesh Kumar, M., dan Yarrakula, K., 2017, Comparison of efficient techniques of hyper-spectral image preprocessing for mineralogy and vegetation studies: Indian Journal of Geo-Marine Sciences, v. 46, p. 1008–1021.
- Wagtendonk, J. van, dan Root, R., 2000, Hyperspectral analysis of multi-temporal Landsat TM data for mapping fuels in Yosemite National Park: of the Joint, p. 1–5.
- Waldhoff, G., Bubenzer, O., Bolten, A., Koppe, W., dan Bareth, G., 2008, Spectral analysis of aster, Hyperion, and Quickbird data for geomorphological and geological research in Egypt (Dakhla Oasis, western desert): International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives, v. 37.
- Wibowo, T.H., 2022, Dinamika Geologi LUSI, Indonesia (Disertasi).
- Wibowo, H.T., Prastisho, B., Prasetyadi, C., dan Yudiantoro, D.F., 2018, The evolution of Sidoarjo hot mudflow (Lusi), Indonesia: IOP Conference Series: Earth and Environmental Science, v. 212, doi:10.1088/1755-1315/212/1/012050.
- Winarno, T., Gunawan, Y.B.A., dan Marin, J., 2019, Analisis Mineralogi dan Kandungan Kimia Endapan Lumpur Sidoarjo dan Arah Pemanfaatannya: Teknik, v. 40, p. 91, doi:10.14710/teknik.v39i3.21742.
- Wiweka, 2008, Kapabilitas Citra Hiperspektral: Berita Dirgantara, v. 9, p. 55–60.
- Zazi, L., Boutaleb, A., dan Guettouche, M.S., 2017, Identification and mapping of clay minerals in the region of Djebel Meni (Northwestern Algeria) using hyperspectral imaging, EO-1 Hyperion sensor: Arabian Journal of Geosciences, v. 10, p. 1–10, doi:10.1007/s12517-017-3015-z.
- Zhai, S., Jian, W., Mao, J., Duan, S., Zuo, J., dan Sun, P., 2023, Significance of pyrophyllite parameters in shortwave infrared spectroscopy: A case study of the Guihu super-large pyrophyllite deposit: Ore Geology Reviews, v. 155, p.

105374, doi:10.1016/j.oregeorev.2023.105374.

Zhang, S., Xiao, K., Carranza, E.J.M., dan Yang, F., 2018, Maximum Entropy and *random forest* Modeling of Mineral Potential: Analysis of Gold Prospectivity in the Hezuo–Meiwu District, West Qinling Orogen, China: Natural Resources Research, v. 28, p. 645–664, doi:10.1007/s11053-018-9425-0.