DAFTAR PUSTAKA

Abdı, Amina et al. 2021. "Landslide Susceptibility Mapping Using GIS-Based Fuzzy Logic and the Analytical Hierarchical Processes Approach: A Case Study in Constantine (North-East Algeria)." *Geotechnical and Geological Engineering* 39(8): 5675–91.

Ardliansyah, Moelki Fahmi. 2017. "Implementasi Titik Koordinat Tengah Kabupaten Atau Kota Dalam Perhitungan Jadwal Waktu Salat." *Al-Ahkam* 27(2): 213.

Arfaini, Juwita. 2016. "Pembuatan DEM (Digital Elevation Model) Menggunakan Metode TIN, IDW, Dan Kriging Dari Data Foto Udara." *Intitut Teknologi Sepuluh Novemner*: 5–21.

Arivalagan, R. 2019. "Logistics Network Optimization in Distributing Critical Medical Supplies for a Pharmaceutical Company." *International Journal of Recent Technology and Engineering* 8(3): 7767–70.

Chen, Wei, Jianbing Peng, et al. 2018. "Landslide Susceptibility Modelling Using GIS-Based Machine Learning Techniques for Chongren County, Jiangxi Province, China." *Science of the Total Environment* 626: 1121–35.

Chen, Wei, Shuai Zhang, Renwei Li, and Himan Shahabi. 2018. "Performance Evaluation of the GIS-Based Data Mining Techniques of Best-First Decision Tree, Random Forest, and Naïve Bayes Tree for Landslide Susceptibility Modeling." *Science of the Total Environment* 644: 1006–18. https://doi.org/10.1016/j.scitotenv.2018.06.389.

Daerah, Analisa, and Rawan Bencana. 2016. "LONGSOR DENGAN MENGGUNAKAN METODE FUZZY LOGIC (Studi Kasus : Kabupaten Probolinggo , Jawa Timur)." 17: 47–48.

Effendi, Arief Yusuf, and Teguh Hariyanto. 2016a. "Pembuatan Peta Daerah Rawan Bencana Tanah." *Jurnal Teknik Geomatika* 5(2). https://media.neliti.com/media/publications/192052-ID-pembuatan-peta-ah-rawan-bencana-tana.pdf.

2016b. "Pembuatan Peta Daerah Rawan Bencana Tanah Longsor Dengan ggunakan Metode Fuzzy Logic." *Jurnal Teknik ITS* 5(2): A714–22.

Fang, Zhice, Yi Wang, Ling Peng, and Haoyuan Hong. 2020. “Integration of Convolutional Neural Network and Conventional Machine Learning Classifiers for Landslide Susceptibility Mapping.” *Computers and Geosciences* 139.

Fattoruso, Grazia et al. 2015. “Optimal Sensors Placement for Flood Forecasting Modelling.” *Procedia Engineering* 119(1): 927–36. http://dx.doi.org/10.1016/j.proeng.2015.08.971.

Informatika, Teknik. 2016. “Pemetaan Kerentanan Longsor Menggunakan Fuzzy Logika : Studi Kasus Di Ponorogo , Jawa Timur , Indonesia.” : 0–6.

Koko Mukti Wibowo, Indra Kanedi, Juju Jumadi. 2021. “Sistem Informasi Geografis (Sig) Menentukan Lokasi Pertambangan Batu Bara Di Provinsi Bengkulu Berbasis Website.” *Jurnal Media Infotama* 11(1): 223–60.

Lee, Ching-fang et al. 2016. “Menggabungkan Parameter Curah Hujan Dan Kerentanan Tanah Longsor Untuk Memperkirakan Tanah Longsor Dangkal Di Taiwan Menggabungkan Parameter Curah Hujan Dan Kerentanan Longsor Terhadap Prakiraan Dangkal Tanah Longsor Di Taiwan Surel : Lwwei@sinotech.Org.T.”

Li, Jiada. 2021. “Exploring the Potential of Utilizing Unsupervised Machine Learning for Urban Drainage Sensor Placement under Future Rainfall Uncertainty.” *Journal of Environmental Management* 296(2001).

Maranò, Stefano, Donat Fäh, and Yue M. Lu. 2014. “Sensor Placement for the Analysis of Seismic Surface Waves: Sources of Error, Design Criterion and Array Design Algorithms.” *Geophysical Journal International* 197(3): 1566–81.

“Peta Tingkat Kerawanan Longsor.” 2015. : 650.

Przystałka, Piotr, and Wojciech Moczulski. 2012. “Optimal Placement of Sensors and Actuators for Leakage Detection and Localization.” *IFAC Proceedings Volumes (IFAC-PapersOnline)* 8(PART 1): 666–71.

Sameen, Maher Ibrahim, and Biswajeet Pradhan. 2019. “Landslide Detection Using dual Networks and the Fusion of Spectral and Topographic Information.” *E Access* 7(August): 114363–73.

Maher Ibrahim, Biswajeet Pradhan, and Saro Lee. 2020. “Application of

Convolutional Neural Networks Featuring Bayesian Optimization for Landslide Susceptibility Assessment." *Catena* 186(September).

Sugianti, Novalia Dwi Rohmatun, Ida Bagus Ketut Widiartha, and Aryo Yudho Husodo. 2019. "Prototype Early Warning System Tanah Longsor Menggunakan Fuzzy Logic Berbasis Google Maps." *J-Cosine* 3(2): 154–61.

Vakhshoori, Vali, Hamid Reza Pourghasemi, Mohammad Zare, and Thomas Blaschke. 2019. "Landslide Susceptibility Mapping Using GIS-Based Data Mining Algorithms." *Water (Switzerland)* 11(11): 7–13.

Villez, Kris, Peter A. Vanrolleghem, and Lluís Corominas. 2016. "Optimal Flow Sensor Placement on Wastewater Treatment Plants." *Water Research* 101: 75–83.

Wang, Yi, Zhice Fang, and Haoyuan Hong. 2019. "Comparison of Convolutional Neural Networks for Landslide Susceptibility Mapping in Yanshan County, China." *Science of the Total Environment* 666: 975–93. https://doi.org/10.1016/j.scitotenv.2019.02.263.

Zhang, Qingzhou et al. 2020. "Assessing the Global Resilience of Water Quality Sensor Placement Strategies within Water Distribution Systems." *Water Research* 172: 115527. https://doi.org/10.1016/j.watres.2020.115527.

Abdı, Amina et al. 2021. "Landslide Susceptibility Mapping Using GIS-Based Fuzzy Logic and the Analytical Hierarchical Processes Approach: A Case Study in Constantine (North-East Algeria)." *Geotechnical and Geological Engineering* 39(8): 5675–91.

Ardliansyah, Moelki Fahmi. 2017. "Implementasi Titik Koordinat Tengah Kabupaten Atau Kota Dalam Perhitungan Jadwal Waktu Salat." *Al-Ahkam* 27(2): 213.

Arfaini, Juwita. 2016. "Pembuatan DEM (Digital Elevation Model) Menggunakan Metode TIN, IDW, Dan Kriging Dari Data Foto Udara." *Intitut Teknologi Sepuluh Novemner*: 5–21.

Arivalagan, R. 2019. "Logistics Network Optimization in Distributing Critical lical Supplies for a Pharmaceutical Company." *International Journal of ent Technology and Engineering* 8(3): 7767–70.

ei, Jianbing Peng, et al. 2018. "Landslide Susceptibility Modelling Using

GIS-Based Machine Learning Techniques for Chongren County, Jiangxi Province, China." *Science of the Total Environment* 626: 1121–35.

Chen, Wei, Shuai Zhang, Renwei Li, and Himan Shahabi. 2018. "Performance Evaluation of the GIS-Based Data Mining Techniques of Best-First Decision Tree, Random Forest, and Naïve Bayes Tree for Landslide Susceptibility Modeling." *Science of the Total Environment* 644: 1006–18. https://doi.org/10.1016/j.scitotenv.2018.06.389.

Daerah, Analisa, and Rawan Bencana. 2016. "LONGSOR DENGAN MENGGUNAKAN METODE FUZZY LOGIC (Studi Kasus : Kabupaten Probolinggo , Jawa Timur)." 17: 47–48.

Effendi, Arief Yusuf, and Teguh Hariyanto. 2016a. "Pembuatan Peta Daerah Rawan Bencana Tanah." *Jurnal Teknik Geomatika* 5(2). https://media.neliti.com/media/publications/192052-ID-pembuatan-peta-daerah-rawan-bencana-tana.pdf.

———. 2016b. "Pembuatan Peta Daerah Rawan Bencana Tanah Longsor Dengan Menggunakan Metode Fuzzy Logic." *Jurnal Teknik ITS* 5(2): A714–22.

Fang, Zhice, Yi Wang, Ling Peng, and Haoyuan Hong. 2020. "Integration of Convolutional Neural Network and Conventional Machine Learning Classifiers for Landslide Susceptibility Mapping." *Computers and Geosciences* 139.

Fattoruso, Grazia et al. 2015. "Optimal Sensors Placement for Flood Forecasting Modelling." *Procedia Engineering* 119(1): 927–36. http://dx.doi.org/10.1016/j.proeng.2015.08.971.

Informatika, Teknik. 2016. "Pemetaan Kerentanan Longsor Menggunakan Fuzzy Logika : Studi Kasus Di Ponorogo , Jawa Timur , Indonesia." : 0–6.

Koko Mukti Wibowo, Indra Kanedi, Juju Jumadi. 2021. "Sistem Informasi Geografis (Sig) Menentukan Lokasi Pertambangan Batu Bara Di Provinsi Bengkulu Berbasis Website." *Jurnal Media Infotama* 11(1): 223–60.

Lee, Ching-fang et al. 2016. "Menggabungkan Parameter Curah Hujan Dan ɛntanan Tanah Longsor Untuk Memperkirakan Tanah Longsor Dangkal 'aiwan Menggabungkan Parameter Curah Hujan Dan Kerentanan Longsor ıadap Prakiraan Dangkal Tanah Longsor Di Taiwan Surel :

Lwwei@sinotech.Org.T."

Li, Jiada. 2021. "Exploring the Potential of Utilizing Unsupervised Machine Learning for Urban Drainage Sensor Placement under Future Rainfall Uncertainty." *Journal of Environmental Management* 296(2001).

Maranò, Stefano, Donat Fäh, and Yue M. Lu. 2014. "Sensor Placement for the Analysis of Seismic Surface Waves: Sources of Error, Design Criterion and Array Design Algorithms." *Geophysical Journal International* 197(3): 1566–81.

"Peta Tingkat Kerawanan Longsor." 2015. : 650.

Przystałka, Piotr, and Wojciech Moczulski. 2012. "Optimal Placement of Sensors and Actuators for Leakage Detection and Localization." *IFAC Proceedings Volumes (IFAC-PapersOnline)* 8(PART 1): 666–71.

Sameen, Maher Ibrahim, and Biswajeet Pradhan. 2019. "Landslide Detection Using Residual Networks and the Fusion of Spectral and Topographic Information." *IEEE Access* 7(August): 114363–73.

Sameen, Maher Ibrahim, Biswajeet Pradhan, and Saro Lee. 2020. "Application of Convolutional Neural Networks Featuring Bayesian Optimization for Landslide Susceptibility Assessment." *Catena* 186(September).

Sugianti, Novalia Dwi Rohmatun, Ida Bagus Ketut Widiartha, and Aryo Yudho Husodo. 2019. "Prototype Early Warning System Tanah Longsor Menggunakan Fuzzy Logic Berbasis Google Maps." *J-Cosine* 3(2): 154–61.

Vakhshoori, Vali, Hamid Reza Pourghasemi, Mohammad Zare, and Thomas Blaschke. 2019. "Landslide Susceptibility Mapping Using GIS-Based Data Mining Algorithms." *Water (Switzerland)* 11(11): 7–13.

Villez, Kris, Peter A. Vanrolleghem, and Lluís Corominas. 2016. "Optimal Flow Sensor Placement on Wastewater Treatment Plants." *Water Research* 101: 75–83.

Wang, Yi, Zhice Fang, and Haoyuan Hong. 2019. "Comparison of Convolutional Neural Networks for Landslide Susceptibility Mapping in Yanshan County, ıa." *Science of the Total Environment* 666: 975–93. s://doi.org/10.1016/j.scitotenv.2019.02.263.

ingzhou et al. 2020. "Assessing the Global Resilience of Water Quality

Sensor Placement Strategies within Water Distribution Systems." *Water Research* 172: 115527. https://doi.org/10.1016/j.watres.2020.115527.

Lampiran

Lampiran : Dataset hasil pengolahan algoritma fuzzy logic

Kategori Kerawanan Rendah

lat	Long	Nilai Curah Hujan	Nilai Ketinggian	Nilai Kemiringan	Nilai JKJ	Nilai Penggunaan Lahan	Nilai Jenis Tanah	Nilai Kerawanan	Keterangan
-3.15900856210427	118.922322906949	1510	150	4	401	4	25	9	Rendah
-3.15900856210427	118.922322906949	1510	150	4	401	4	25	9	Rendah
-3.15900856210427	118.922322906949	1510	150	4	401	4	25	9	Rendah
-3.15900856210427	118.922322906949	1510	150	4	401	4	25	9	Rendah
-3.15900856210427	118.922322906949	1510	150	4	401	4	25	9	Rendah
-3.53798202991295	118.959195139727	1520	200	4	401	5	26	13	Rendah
-3.53798202991295	118.959195139727	1520	200	4	401	5	26	13	Rendah
-3.53798202991295	118.959195139727	1520	200	4	401	5	26	13	Rendah
-3.53798202991295	118.959195139727	1520	200	4	401	5	26	13	Rendah
-3.53798202991295	118.959195139727	1520	200	4	401	5	26	13	Rendah
-3.15900856210427	118.922322906949	1600	170	5	401	6	27	15	Rendah
-3.15900856210427	118.922322906949	1600	170	5	401	6	27	15	Rendah
-3.15900856210427	118.922322906949	1600	170	5	401	6	27	15	Rendah
-3.15900856210427	118.922322906949	1600	170	5	401	6	27	15	Rendah
-3.15900856210427	118.922322906949	1600	170	5	401	6	27	15	Rendah
-3.15900856210427	118.922322906949	1650	185	6	401	7	29	19	Rendah
-3.15900856210427	118.922322906949	1650	185	6	401	7	29	19	Rendah
-3.15900856210427	118.922322906949	1650	185	6	401	7	29	19	Rendah
-3.15900856210427	118.922322906949	1650	185	6	401	7	29	19	Rendah
-3.15900856210427	118.922322906949	1650	185	6	401	7	29	19	Rendah

Kategori Kerawanan Sedang

lat	Long	Nilai Curah Hujan	Nilai Ketinggian	Nilai Kemiringan	Nilai JKJ	Nilai Penggunaan Lahan	Nilai Jenis Tanah	Nilai Kerawanan	Keterangan
-2.93507562685859	118.889088684684	1701	270	12	210	4	25	47	Sedang
-2.93507562685859	118.889088684684	1701	270	12	210	4	25	47	Sedang
-2.93507562685859	118.889088684684	1701	270	12	210	4	25	47	Sedang
-2.93507562685859	118.889088684684	1701	270	12	210	4	25	47	Sedang
-2.93507562685859	118.889088684684	1701	270	12	210	4	25	47	Sedang
-3.00057379788637	118.909016389125	1800	300	13	75	28	25	27	Sedang
-3.00057379788637	118.909016389125	1800	300	13	75	28	25	27	Sedang
-3.53992685373049	118.961868851817	1701	260	9	210	3	24	30	Sedang
-3.53992685373049	118.961868851817	1701	260	9	210	3	24	30	Sedang
-2.95985487512058	118.87714938061	1950	350	33	150	27	40	32	Sedang
-2.95985487512058	118.87714938061	1950	350	33	150	27	40	32	Sedang
-3.02552082501577	118.875289077628	1701	275	9	205	4	21	35	Sedang
-3.02071131903917	118.894449904185	1701	275	9	205	4	21	35	Sedang
-2.94960060976131	118.88641565631	1750	550	20	250	17	25	37	Sedang
-2.94960060976131	118.88641565631	1750	550	20	250	17	25	37	Sedang
-3.08453337307869	118.847751612845	1701	260	10	210	4	21	40	Sedang
-3.08453337307869	118.847751612845	1701	260	10	210	4	21	40	Sedang
[illegible]8265478	118.899028623962	1701	275	14	205	4	22	45	Sedang
[illegible]8265478	118.899028623962	1701	275	14	205	4	22	45	Sedang
[illegible]7726936	118.931389953386	1701	490	14	220	4	26	49	Sedang

Kategori Kerawanan Tinggi

lat	Long	Nilai Curah Hujan	Nilai Ketinggian	Nilai Kemiringan	Nilai JKJ	Nilai Penggunaan Lahan	Nilai Jenis Tanah	Nilai Kerawanan	Keterangan
-2.97191586716356	118.892897351909	1710	520	16	210	50,5	53	52	Tinggi
-2.97191586716356	118.892897351909	1710	520	16	210	50,5	53	52	Tinggi
-2.97191586716356	118.892897351909	1710	520	16	210	50,5	53	52	Tinggi
-2.9900479131191	118.911186072402	1800	530	16	210	50,5	53	53	Tinggi
-2.9900479131191	118.911186072402	1800	530	16	210	50,5	53	53	Tinggi
-2.9900479131191	118.911186072402	1800	530	16	210	50,5	53	53	Tinggi
-3.00035535620282	118.934959719981	1830	550	40,5	310	50,5	76	57	Tinggi
-3.00035535620282	118.934959719981	1830	550	40,5	310	50,5	76	57	Tinggi
-3.00451886011686	118.883172083159	1850	760	30	75	31	52	59	Tinggi
-3.00451886011686	118.883172083159	1850	760	30	75	31	52	59	Tinggi
-3.00451886011686	118.883172083159	1850	760	30	75	31	52	59	Tinggi
-3.02659526949871	119.001234351497	2100	505	26	305	50,5	77	62	Tinggi
-3.02659526949871	119.001234351497	2100	505	26	305	50,5	77	62	Tinggi
-3.02659526949871	119.001234351497	2100	505	26	305	50,5	77	62	Tinggi
-3.05559771840577	118.91390920788	2110	510	27	310	50,5	80	63	Tinggi
-3.05559771840577	118.91390920788	2110	510	27	310	50,5	80	63	Tinggi
-3.20252142263061	118.869826526669	2000	760	33	150	35	55	73	Tinggi
-3.20252142263061	118.869826526669	2000	760	33	150	35	55	73	Tinggi
-3.20252142263061	118.869826526669	2000	760	33	150	35	55	73	Tinggi
-3.20252142263061	118.869826526669	2000	760	33	150	35	55	73	Tinggi

Kategori Kerawanan Sangat Tinggi

lat	Long	Nilai Curah Hujan	Nilai Ketinggian	Nilai Kemiringan	Nilai JKJ	Nilai Penggunaan Lahan	Nilai Jenis Tanah	Nilai Kerawanan	Keterangan
-3.00292668443787	119.039008428837	1950	1000,5	40,5	75	20	75	79	Sangat Tinggi
-3.00292668443787	119.039008428837	1950	1000,5	40,5	75	20	75	79	Sangat Tinggi
-3.00292668443787	119.039008428837	1950	1000,5	40,5	75	20	75	79	Sangat Tinggi
-3.04245412924166	118.932144336068	1970	1000,5	26	120	50,5	78	81	Sangat Tinggi
-3.04245412924166	118.932144336068	1970	1000,5	26	120	50,5	78	81	Sangat Tinggi
-3.04245412924166	118.932144336068	1970	1000,5	26	120	50,5	78	81	Sangat Tinggi
-3.04245412924166	118.932144336068	1970	1000,5	26	120	50,5	78	81	Sangat Tinggi
-3.04504322546504	118.950407172445	2110	760	27	40	50,5	80	87	Sangat Tinggi
-3.04504322546504	118.950407172445	2110	760	27	40	50,5	80	87	Sangat Tinggi
-3.04504322546504	118.950407172445	2110	760	27	40	50,5	80	87	Sangat Tinggi
-3.04773118585806	118.913895278355	2120	770	17	25	50,5	85	93	Sangat Tinggi
-3.04773118585806	118.913895278355	2120	770	17	25	50,5	85	93	Sangat Tinggi
-3.04773118585806	118.913895278355	2120	770	17	25	50,5	85	93	Sangat Tinggi
-3.04773118585806	118.913895278355	2120	770	17	25	50,5	85	93	Sangat Tinggi
-3.05034869290849	118.916508276714	1710	1000,5	18	20	50,5	88	95	Sangat Tinggi
-3.05034869290849	118.916508276714	1710	1000,5	18	20	50,5	88	95	Sangat Tinggi
-3.05034869290849	118.916508276714	1710	1000,5	18	20	50,5	88	95	Sangat Tinggi
290849	118.916508276714	1710	1000,5	18	20	50,5	88	95	Sangat Tinggi
290849	118.916508276714	1710	1000,5	18	20	50,5	88	95	Sangat Tinggi
290849	118.916508276714	1710	1000,5	18	20	50,5	88	95	Sangat Tinggi

Sertifikat Prosiding

The 2023
IC3INA
The 10 INTERNATIONAL CONFERENCE ON COMPUTER, CONTROL, INFORMATICS AND ITS APPLICATIONS
With the Theme: "Exploring the Power of Data: Leveraging Information to Drive Digital Innovation"

CERTIFICATE

OF APPRECIATION | No. IC3INA/2023/031

Zulkifli Jawas

as an Oral Presenter

With Title :

Landslide Susceptibility Zoning Using Fuzzy Logic Algorithm & GIS: Study Case In Majene, West Sulawesi

Virtual Conference
Bandung, October 4th-5th 2023

Arafat Febriandirza Ph.D.
General Chair of the 2023 IC3INA