

References

- [1] Mesoscale & Microscale Meteorology Laboratory, *Weather research and forecasting model*. [Online]. Available: <https://www.mmm.ucar.edu/weather-research-and-forecasting-model>.
- [2] CURW SL, 2017 *story map in Sri Lanka*. [Online]. Available: <https://www.curwsl.org/public/2017-story-map/>.
- [3] ——, *Observed rainfall of CURW SL*. [Online]. Available: <https://www.curwsl.org/public/observed-rainfall/>.
- [4] A. Kawasaki, P. Koudelova, K. Tamakawa, A. Kitamoto, E. Ikoma, K. Ikeuchi, R. Shibasaki, M. Kitsuregawa, and T. Koike, “Data integration and analysis system (DIAS) as a platform for data and model integration: Cases in the field of water resources management and disaster risk reduction,” *Data Science Journal*, vol. 17, 2018. DOI: 10.5334/dsj-2018-029.
- [5] C. H. Macdermaid, R. C. Lipschutz, P. Hildreth, R. A. Ryan, A. B. Stanley, M. F. Barth, and P. A. Miller, “Architecture Of MADIS data processing and distribution at Fsl P2.39,” 2005. [Online]. Available: <https://pdfs.semanticscholar.org/d315/f09145089bff01d5dc211d6ac7dd78f220d0.pdf>.
- [6] M. Werner, J. Schellekens, P. Gijsbers, M. van Dijk, O. van den Akker, and K. Heynert, “The Delft-FEWS flow forecasting system,” *Environmental Modelling and Software*, vol. 40, pp. 65–77, Feb. 2013. DOI: 10.1016/j.envsoft.2012.07.010.
- [7] G. Naveendrakumar, “Five Decadal Trends in Averages and Extremes of Rainfall and Temperature in Sri Lanka,” DOI: 10.1155/2018/4217917.

- [8] M. G. F. Werner, J. Schellekens, and J. C. J. Kwadijk, “Flood early warning systems for hydrological (Sub) catchments,” in *Encyclopedia of Hydrological Sciences*, Chichester, UK: John Wiley & Sons, Ltd, Oct. 2005. doi: 10.1002/0470848944.hsa022.
- [9] C. Haggett, “An integrated approach to flood forecasting and warning in England and Wales,” *Water and Environment Journal*, vol. 12, no. 6, pp. 425–432, Dec. 1998. doi: 10.1111/j.1747-6593.1998.tb00211.x.
- [10] T. Kokkonen, A. Jolma, and H. Koivusalo, “Interfacing environmental simulation models and databases using XML,” *Environmental Modelling & Software*, vol. 18, no. 5, pp. 463–471, Jun. 2003. doi: 10.1016/S1364-8152(03)00020-3.
- [11] K. Droege, D. Gannon, D. Reed, B. Plale, J. Alameda, T. Baltzer, K. Brewster, R. Clark, B. Domenico, S. Graves, E. Joseph, D. Murray, R. Ramachandran, M. Ramamurthy, L. Ramakrishnan, J. Rushing, D. Weber, R. Wilhelmson, A. Wilson, M. Xue, and S. Yalda, “Service-oriented environments for dynamically interacting with mesoscale weather,” *Computing in Science and Engineering*, vol. 7, no. 6, pp. 12–29, Nov. 2005. doi: 10.1109/MCSE.2005.124. [Online]. Available: <http://ieeexplore.ieee.org/document/1524855/>.
- [12] D. Salas, X. Liang, M. Navarro, Y. Liang, and D. Luna, “An open-data open-model framework for hydrological models’ integration, evaluation and application,” *Environmental Modelling and Software*, vol. 126, p. 104622, Apr. 2020, ISSN: 13648152. doi: 10.1016/j.envsoft.2020.104622.
- [13] C. Hewitt, *Why modern systems need a new programming model*. [Online]. Available: <https://doc.akka.io/docs/akka/2.5.5/scala/guide/actors-motivation.html>.
- [14] Akka.io, *When and where to use Akka cluster*. [Online]. Available: <https://doc.akka.io/docs/akka/2.5/cluster-usage.html#when-and-where-to-use-akka-cluster>.
- [15] IBM, *Containerization Explained*. [Online]. Available: <https://www.ibm.com/cloud/learn/containerization>.

- [16] Docker, *App Containerization*. [Online]. Available: <https://www.docker.com/resources/what-container>.
- [17] Christensen Ben, *Don't Build a Distributed Monolith*. [Online]. Available: <https://www.microservices.com/talks/dont-build-a-distributed-monolith/>.
- [18] J. Lewis and M. Fowler, *Microservices*. [Online]. Available: <https://martinfowler.com/articles/microservices.html>.
- [19] ——, *Microservices pattern: Smart endpoints and dumb pipes*. [Online]. Available: <https://martinfowler.com/articles/microservices.html#SmartEndpointsAndDumbPipes>.
- [20] ——, *Microservices pattern: Decentralized data management*. [Online]. Available: <https://martinfowler.com/articles/microservices.html#DecentralizedDataManagement>.
- [21] C. Richardson, *Microservices pattern: Database per service*. [Online]. Available: <https://microservices.io/patterns/data/database-per-service.html>.
- [22] ——, *Microservices pattern: Sagas*. [Online]. Available: <https://microservices.io/patterns/data/saga.html>.
- [23] Redis, *Redis documentation*. [Online]. Available: <https://redis.io/>.
- [24] InfluxDB, *InfluxDB documentation*. [Online]. Available: <https://docs.influxdata.com/influxdb/>.
- [25] Unidata, *Network Common Data Form*. [Online]. Available: <https://www.unidata.ucar.edu/software/netcdf/>.
- [26] MongoDB, *MongoDB geospatial queries manual*. [Online]. Available: <https://docs.mongodb.com/manual/geospatial-queries/>.
- [27] Google, *Google public dataset - Countries*. [Online]. Available: https://developers.google.com/public-data/docs/canonical/countries_csv.
- [28] Apache Software Foundation, *Apache JMeter*. [Online]. Available: <https://jmeter.apache.org/>.
- [29] H. M. G. C. Karunaratne, *WDIAS distributed performance testing based on JMeter*. [Online]. Available: <https://github.com/wdias/wdias-performance-test>.

- [30] ——, *WDIAS performance test plan*. [Online]. Available: https://github.com/wdias/wdias-performance-test/blob/master/test-plan/TEST_PLAN.md.
- [31] ——, *WDIAS setup on Amazon elastic Kubernetes service*. [Online]. Available: https://github.com/wdias/wdias/blob/master/docs/Amazon_EKS.md.
- [32] Linux Foundation, *Kubernetes: Production-grade container orchestration*. [Online]. Available: <https://kubernetes.io/>.
- [33] CNCF, *Helm documentations*. [Online]. Available: <https://helm.sh/>.
- [34] H. M. G. C. Karunarathne, *Helm charts for WDIAS deployments*. [Online]. Available: <https://github.com/wdias/wdias-helm-charts>.
- [35] Apache Software Foundation, *JMeter: Transaction throughput vs threads plugin*. [Online]. Available: <https://jmeter-plugins.org/wiki/TransactionThroughputVsThreads/>.
- [36] Linux Foundation, *Kubernetes persistent volumes*. [Online]. Available: <https://kubernetes.io/docs/concepts/storage/persistent-volumes/#access-modes>.
- [37] ——, *Kubernetes: Managing compute resources for containers*. [Online]. Available: <https://kubernetes.io/docs/concepts/configuration/manage-compute-resources-containers/>.
- [38] H. M. G. C. Karunarathne and H. M. N. Bandara, *Weather data integration and assimilation system (WDIAS) source code*. [Online]. Available: <https://github.com/wdias/wdias>.
- [39] H. M. Gihan Chanuka Karunarathne, H. M. Dilum Bandara, and S. Herath, “WDIAS: A Microservices-Based Weather Data Integration and Assimilation System,” in *MERCon 2020 - 6th International Multidisciplinary Moratuwa Engineering Research Conference, Proceedings*, Institute of Electrical and Electronics Engineers Inc., Jul. 2020, pp. 289–294, ISBN: 9781728190594. DOI: 10.1109/MERCon50084.2020.9185270.

- [40] R. Scolati, I. Fronza, N. El Ioini, A. Samir, and C. Pahl, “A containerized big data streaming architecture for edge cloud computing on clustered single-board devices,” in *CLOSER 2019 - Proceedings of the 9th International Conference on Cloud Computing and Services Science*, SciTePress, 2019, pp. 68–80, ISBN: 9789897583650. DOI: 10.5220/0007695000680080.