References

Allen, R.G., Pereira, L.S., Raes, D., Smith, M., Ab, W., 1998. Crop evapotranspiration - guidelines for computing crop water requirements. FAO - Food Agric. Organ. United Nations Rome 1–15. https://doi.org/10.1016/j.eja.2010.12.001.
API Reference [WWW Document], 2017. AccuWeather APIs (accessed 9.2.17). https://developer.accuweather.com/accuweather-forecast-api/apis.
Chen, Q., Chen, T.Y., 1993. Estimation of river basin evapotranspi- ration over complex terrain using NOAA AVHRR data. Acta Geogr. Sin. 48 (1), 61–69.
Cobaner, M., 2011. Evapotranspiration estimation by two different neuro-fuzzy inference systems. J. Hydrol. 398, 292–302. https://doi.org/10.1016/j.jhydrol.2010.12.030.
da Cruz, M.A.A., Rodrigues, J.J.P.C., Al-Muhtadi, J., Korotaev, V., Albuquerque, V.H.C.,

A reference model for internet of things middleware. 1 1. IEEE Internet Things J. 5. https://doi.org/10.1109/JIOT.2018.2796561.
Davis, S.L., Dukes, M.D., 2010. Irrigation scheduling performance by evapotranspirationbased controllers. Agric. Water Manage. 98, 19–28. https://doi.org/10.1016/j.agwat.2010.07.006.
Davis, S.L., Dukes, M.D., Miller, G.L., 2009. Landscape irrigation by evapotranspirationbased irrigation controllers under dry conditions in Southwest Florida. Agric. Water Manage. 96, 1828–1836. https://doi.org/10.1016/j.agwat.2009.08.005.
Drucker, H., Burges, C.J., Kaufman, L., Smola, A., Vapoik, V., 1997. Support vector regression machines. Adv. Neural Inf. Process. Syst. 1, 155–161. https://doi.org/10.1.1.10.4845.
G. o. I. NITI Aayog, 2015. Raising Agricultural Productivity and Making Farming Remunerative for Farmers [WWW Document] http://niti.gov.in/content/raisingagricultural-productivity-and-making-farming-remunerative-farmers (accessed 9.10.18).
Hargreaves, George H., Samani, Zohrab A., 1985. Reference crop evapotranspiration from temperature. Appl. Eng. Agric. 1, 96–99. https://doi.org/10.13031/2013.26773.
Gill, M.K., Asefa, T., Kemblowski, M.W., McKee, M., 2006. Soil moisture prediction using support vector machines. J. Am. Water Resour. Assoc. 42, 1033–1046. https://doi.org/10.1111/j.1752-1688.2006.tb04512.x.
Goldstein, A., Fink, L., Meitin, A., Bohadana, S., Lutenberg, O., Ravid, G., 2017. Applying machine learning on sensor data for irrigation recommendations: revealing the agronomist's tacit knowledge. Precis. Agric. 19, 421–444. https://doi.org/10.1007/s11119-017-9527-4.
Gubbi, J., Buyya, R., Marusic, S., Palaniswami, M., 2013. Internet of things (IoT): a vision, architectural elements, and future directions. Futur. Gener. Comput. Syst. 29, 1645–1660. https://doi.org/10.1016/j.future.2013.01.010.
Gutiérrez, J., Villa-medina, J.F., Nieto-Garibay, A., Porta-gándara, M.Á., Gutierrez, J., Villa-medina, J.F., Nieto-Garibay, A., Porta-Gandara, M.A., 2014. Automated irrigation system using a wireless sensor network and GPRS module. IEEE Trans. Instrum. Meas. 63, 166–176. https://doi.org/10.1109/TIM.2013.2276487.
Hearst, M.A., Dumais, S.T., Osuna, E., Platt, J., Scholkopf, B., 1998. Support vector machines. IEEE Intell. Syst. Appl. 13, 18–28. https://doi.org/10.1109/5254.708428.
Idso, S.B., Jackson, R.D., Pinter, P.J., Reginato, R.J., Hatfield, J.L., 1981. Normalizing the stress-degree-day parameter for environmental variability. Agric. Meteorol. 24, 45–55. https://doi.org/10.1016/0002-1571(81)90032-7.
Jaguey, J.G., Villa-Medina, J.F., Lopez-Guzman, A., Porta-Gandara, M.A., 2015. Smartphone irrigation sensor. IEEE Sens. J. 15, 5122–5127. https://doi.org/10.1109/JSEN.2015.2435516.
Jones, J.W., Ritchie, J.T., 1990. Crop growth models. In: Hoffman, G.J., Howel, T.A., Solomon, K.H. (Eds.), Management of Farm Irrigation System ASAE, pp. 63–89.
Shang, K.Z., Wang, S.G., Ma, Y.X., Zhou, Z.J., Wang, J.Y., Liu, H.L.Y., 2007. A scheme for calculating soil moisture content by using routine weather data. Atmos. Chem. Phys. 7, 5197–5206. https://doi.org/10.1017/CBO9781107415324.004.
Kanungo, T., Mount, D.M., Netanyahu, N.S., Piatko, C.D., Silverman, R., Wu, A.Y., 2002. An efficient k-means clustering algorithm: analysis and implementation. IEEE Trans. Pattern Anal. Mach. Intell. 24, 881–892. https://doi.org/10.1109/TPAMI.2002.1017616.
Mean Squared Error [WWW Document], 2018. Tutorvista (accessed 8.29.18). https://math.tutorvista.com/statistics/mean-squared-error.html.
O'Shaughnessy, S.A., Evett, S.R., 2010. Canopy temperature based system effectively schedules and controls center pivot irrigation of cotton. Agric. Water Manage. 97, 1310–1316. https://doi.org/10.1016/j.agwat.2010.03.012.
Ojha, T., Misra, S., Raghuwanshi, N.S., 2015. Wireless sensor networks for agriculture: the state-of-the-art in practice and future challenges. Comput. Electron. Agric. 118, 66–84. https://doi.org/10.1016/j.compag.2015.08.011.
Pandey, V.S., Sharma, D., Shukla, A.K., Tyagi, S., 2017. A low-cost zigbee based temperature and humidity acquisition system for research and industrial applications. In: Dutta, C.R.K.S.D.K. (Ed.), International Conference on Communication Computing and Networking, pp. 379–385.
Roopaei, M., Rad, P., Choo, K.R., Choo, R., 2017. Cloud of things in smart agriculture: intelligent irrigation monitoring by thermal imaging. IEEE Cloud Comput. 4, 10–15.
Sharma, D., Shukla, A.K., Bhondekar, A.P., Ghanshyam, C., Ojha, A., 2016. A technical assessment of IOT for Indian agriculture sector. In: IJCA Proc. Natl. Symp. Mod. Inf. Commun. Technol Digit. Indiapp. 1–5.
Theobald, C.M., 1974. Generalizations of mean square error applied to ridge regression. J. R. Stat. Soc. Ser. B 36, 103–106. https://doi.org/10.2307/2984775.
United Nations, 2013. World population projected to reach 9.6 billion by 2050 [WWW

Document]. Dep. Econ. Soc. Aff. Popul. Div. United Nations (accessed 2.12.18).
http://www.un.org/en/development/desa/news/population/un-report-worldpopulation-projected-to-reach-9-6-billion-by-2050.html.

Viani, F., Bertolli, M., Salucci, M., Polo, A., 2017. Low-cost wireless monitoring and decision support for water saving in agriculture. IEEE Sens. J. 17, 4299–4309. https://doi.org/10.1109/JSEN.2017.2705043.

Wang, X., Yang, W., Wheaton, A., Cooley, N., Moran, B., 2010. Efficient registration of optical and IR images for automatic plant water stress assessment. Comput. Electron. Agric. 74, 230–237. https://doi.org/10.1016/j.compag.2010.08.004.

Weather API [WWW Document], 2012. Openweather (accessed 8.30.17). https://openweathermap.org/api.