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Comparative Study on Performance of Document Classification Using Supervised Machine Learning Algorithms: KNIME

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ABSTRACT: (Arial-Size 9- Bold) The manuscript should contain an abstract. The abstract should be self-contained and citation-free and should be between 150 and 250 words.

Keywords: Immediately after the abstract, provide 6-10 keywords in alphabetical order, avoiding general and plural terms and multiple concepts.

Abbreviations: GHGs, greenhouse gases; PCM, phase changing material; SC, solar chimney; GCHE, ground coupled heat exchanger; EAHE, earth air heat exchanger; GSHP, ground source heat pump; PV, photo voltaic; HVAC, heating ventilation and air conditioning; AC, air conditioner; PBP, payback period.

I. INTRODUCTION

This section should be succinct, with no subheadings.

II. MATERIALS AND METHODS

This part should contain sufficient detail so that all procedures can be repeated. It can be divided into subsections if several methods are described.

III. RESULTS AND DISCUSSION

This section may each be divided by subheadings or may further divided into next heads as shown below.

Note: Fig. Caption in figures will be in arial 9 font size. Tables will be in arial 8 font size.

A. Passive systems

Passive systems are based on renewable energy sources.

PCMs. PCM is gaining popularity for storing thermal energy. It has high energy storage density.

Solar Chimney (SC). It is old technology, work under principle of stack effect (temperature difference), as shown in Fig. 1. Key factor are solar radiation, air flow rates, solar absorbing plate, inclination angle and gap, cross sectional area of inlet and out let vent, which affect the ventilation rate [1].

In day time it absorbs solar energy but during night time requires heat storage mass i.e. PCMs. SC can be engaged in various applications i.e. ventilation, power generation, food drying [2,3 4].

Wind Tower. It is preferred for cooling purposes in windy areas, dry climate and absence of pollutants.

Earlier it was known as wind catcher, installed at top of the building with the multiple directional openings to capture the more wind from all directions. It is able to work in both day and night for heating/cooling. During night hours cool air takes heat from warm walls then rise due to buoyancy effect [5].

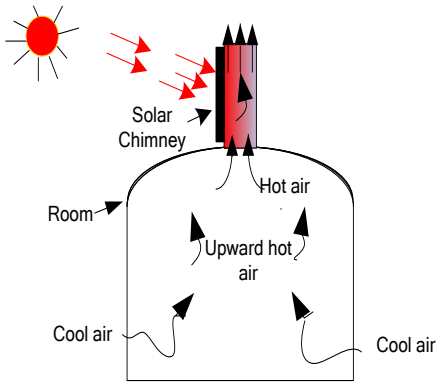

Fig. 1. Solar chimney.

B. Active systems

Active systems consume fossil fuels (i.e. air heater, HVAC) or both i.e. renewable and fossil fuels like ground coupled heat exchanger (GCHE) systems. It is popular, energy efficient and environment friendly. GCHE systems can be classified as earth air heat exchanger (EAHE) system and ground source heat pump (GSHP) systems.

EAHE System. It consumes electricity to blow the air and use earth as heat sink for heating/cooling. EAHE system is also called as earth tubes, earth air pipe, air-to-soil heat exchanger, earth channels, earth canals, earth air tunnel systems, ground tube heat exchanger, subsoil heat exchangers, thermal labyrinths and underground air pipes. Earth temperature remains constant throughout the year to the annual average temperature approximately 5 meter deep. This constant temperature characteristic of earth is utilized for heating/cooling air that passes through buried pipe [6,7]. EAHE system is preferred to those areas where ground temperature fluctuates frequently and in high level. Key factors are air velocity, depth and length of buried pipes, thermal diffusivity of soil, etc.

GSHP systems. Concept of GSHP system was introduced in 1852 but got the viable recognition in 1960-70s. It follows the same principle as refrigerator. It takes electrical power to circulate the fluid through loop for utilizing constant earth's temperature and exchanging heat. It is suitable for all seasons. It is popularly used in various applications in many developed countries i.e. United States, Canada, Switzerland, Sweden, Austria, Germany, etc. It can be further classified as regular and direct heat exchange geothermal system. Comparative study between passive and active systems is presented in Table 1.

Table 1: Comparative study between passive and active systems.

Parameters	Passive systems	Active systems
Cost	Low	High
Fuel	Renewable	Fossil or renewable and fossil both
Applicability	Restricted	in all climatic conditions, day and night both
Efficiency	Low	high
Life	High	moderate
Maintenance	Low	moderate

It is concluded from Table 1 that alone passive or active systems are not appropriate and sustainable due to increasing energy demand trend in space heating/cooling. It forces us to adopt suitable hybrid systems according to tailor made situations.

IV. CONCLUSION

This should clearly explain the main conclusions of the work highlighting its importance and relevance.

V. FUTURE SCOPE

It is mandatory.

ACKNOWLEDGEMENTS

All acknowledgments (if any) should be included at the very end of the paper before the references and may include supporting grants, presentations, and so forth.

CONFLICT OF INTEREST: Compulsory

REFERENCES

[1]. Etheddge, D.M., Steele, L.P., Langenfields, R.L. and Francey, R.J. (1996). Natural and anthropogenic changes in atmospheric CO_2. *J. Geophys. Res.,* **101**(95): 4115–4128.

[2]. B.I.U. Kevin Loria, (2018). The amount of carbon dioxide in the atmosphere just hit its highest level in 800,000 years, and scientists predict deadly consequences. [Online]. Available: https://www.businessinsider.my/carbon-dioxide-record-human-health-effects-2018-5/?r=US&IR=T.

[3]. Change, C. and Basis, T.S. (1974). News from MRPA Sponsoring Agencies. *Midwest Rev. Public Adm.,* **8**(1): 74–83.

[8]. Colvile, R.N., Hutchinson, E.J., Mindell, J.S., and Warren, R. (2000). Millennium Review for submission to Atmospheric Environment. Africa (Lond)., pp. 1–28.

[9]. Editorial (2004). Clean, green conferencing. *Nature*, **432**(7015): 257.

[10]. Health, W., What are an Airport's Impacts?. World Health, pp. 1–30.
[11]. Brasseur, G.P., M. Gupta, B.E. Anderson, S. Balasubramanian, S. Barrett, D. Duda, G. Fleming, P.M. Forster, J. Fuglestvedt, A. Gettelman, R.N. Halthore, S.D. Jacob, M.Z. Jacobson, A. Khodayari, K. Liou, M.T. Lund, R.C. Miake-Lye, P. Minnis, S. Olsen, J.E. Penner, R. Prinn, U. Schumann, H.B. Selkirk, A. Sokolov, N. Unger, P. Wolfe, H. Wong, D.W. Wuebbles, B. Yi, P. Yang, and C. Zhou (2016). Impact of Aviation on Climate: FAA's Aviation Climate Change Research Initiative (ACCRI) Phase II. *Bull. Amer. Meteor. Soc*., **97**(4): 561–583.
[12]. Koroneos, C., Xydis, G., and Polyzakis, A. (2010). The optimal use of renewable energy sources-The case of the new international 'Makedonia' airport of Thessaloniki, Greece. Renew. Sustain. *Energy Rev.,***14**(6): 1622–1628.
[13]. Mills, R. (2011). Airport Solar and Geothermal Power. Thesis.
[14]. Shukla, A.K., Sudhakar, K., and Baredar, P. (2016). Design, simulation and economic analysis of standalone roof top solar PV system in India. *Sol. Energy,* **136**: 437–449.
[15]. A.K. Shukla, K. Sudhakar and P. Baredar, (2016). "Design, simulation and economic analysis of standalone roof top solar PV system in India,". *Sol. Energy,* Vol. **136**, pp. 437–449.
[16]. Kumar, B.S., and Sudhakar, K. (2015). Performance evaluation of 10 MW grid connected solar photovoltaic power plant in India. *Energy Reports*, **1**: 184–192.
[17]. Duraisamy, S., Dhanushkodi, S., and Sudhakar, K. (2019). Thermal Performance of Natural Convection Solar Dryer for Drying Chilli. *International Journal of Emerging Technologies*, **10**(1): 133–138.
[18]. Shukla, A K., Sudhakar, K., and Baredar, P. (2017). Recent advancement in BIPV product technologies : A review*. Energy Build*, **140**: 188–195.
[19]. Akash Kumar Shukla, Sudhakar K, Prashant Baredar, (2016). Simulation and performance analysis of 110 kWp grid-connected photovoltaic system for residential building in India: A comparative analysis of various PV technology, *Energy reports,* **2**: 82-88
[20]. Muley, K.C. and Bhongade, S. (2019). Load Management Techniques and Pricing Model for Demand Side Management – A Review. *International Journal on Emerging Technologies,* **10**(1): 42–46.
[21]. Kumar, A., Sudhakar, K., Baredar, P. and Mamat, R. (2017). Solar P.V. and BIPV system : Barrier, challenges and policy recommendation in India. Renew. Sustain. *Energy Rev.,* **82**(xx): 3314–3322.
[22]. Sharma, P.P.K. (2016). A Review Modeling and Control Strategies for Renewable Based Energy Sources. *International Journal on Emerging Technologies,* **7**(1): 141–147.
[23]. Soni, S. (2018). Review of Maximum Power Point Tracking : History, Developments and Challenges. *International Journal of Electrical, Electronics and Computer Engineering*, **7**(2): 07-10.
[24]. Alzubi, J.A., Manikandan, R., Gayathri, N., and Patan, R. (2019). A Survey of Specific IoT Applications. *International Journal on Emerging Technologies*, **10**(1): 47–53.
[25]. Bajpal, S. and Sethi, V.K. (2017). Review: Design, Simulation and Economic Analysis for Decentralized and Distributed Power Generation in India. *International Journal on Emerging Technologies,* **8**(1): 70–78.
[26]. Sukumaran, S. and Sudhakar, K. (2017). Fully solar powered Raja Bhoj International Airport: A feasibility study. *Resour. Technol.* pp. 1–8.
[27]. National Academies of Sciences, Engineering, and Medicine (2010). Understanding Airspace, Objects, and Their Effects on Airports. Washington, DC: The National Academies Press. https://doi.org/10.17226/14454.
[28]. Sudhakar, K. (2019). SWOT analysis of floating solar plants. *MOJ Solar Photoen Sys.,* **3**(1): 20–22.
[29]. Kumar, N.M., Sudhakar, K., Samykano, M. and Jayaseelan (2018). BIPV market growth: SWOT Analysis and favorable factors. *4th International Conference on Electrical Energy Systems (ICEES)*.
[30]. Min, H.S., Bouhal, T., Naa, N.S., and Munaaim, M.A.C. (2019). Solar Energy development : Case study in Malaysia and Morocco. *International Journal of Emerging Technologies*, **10**(1): 106–113.

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