Learning Classifier Systems [LCF]/Helmholtz Machines/SSG for Information Processing in JikesRVM- Research Virtual Machine [RVM] Related Environments with Ruby + Python + Java & Tools + Data Base Systems.

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Abstract :

Understanding Log-file Analyzer for Learning Classifier Systems - [LCS] + [HM] - Helmholtz Machines + [SSG] - Sobol Sequence Generator + QRNG + ANTLR w.r.t Java + Ruby + Python Using : JRuby + Jython + JI Prolog + Smart Devices [SD] + IoT + High Performance Computing [HPC] + Heterogeneous Systems + MongoDB + Base X DB System.

index words/keywords : Information Processing,HPC,Ruby,Python,Java.

[I] Main Idea + Inspiration + Introduction :

It was proposed and as per our TITLE we are sincerely inspired to probe our Novel Algorithms.

[a] Helmholtz Machines [HM] : https://www.cs.toronto.edu/~hinton/absps/helmholtz.pdf

[b] Learning Classifier Systems [LCS] : https://www.sciencedirect.com/science/article/abs/pii/S0020019001002836

[c] Sobol Sequence Generator [SSG] : https://xilinx.github.io/Vitis_Libraries/quantitative_finance/2019.2/guide_L1/SobolRsg/sobolrsg.html

[d] JikesRVM Research Virtual Machine [RVM] - https://www.jikesrvm.org/

[e] Java : https://docs.oracle.com/javase/8/docs/technotes/guides/language/

[f] Ruby : https://www.ruby-lang.org/en/

[g] Python : https://www.python.org/

[h] LLVM : https://llvm.org/

[i] SableVM - http://www.sablevm.org/

[j] Base X DB System : https://basex.org/

[k] MongoDB System : https://www.mongodb.com/

[l] ANTLR : https://www.antlr.org/

[II] R&D Informatics Framework/s :

What are you waiting for ?

Kindly generate your own R&D Effort.

We have put online a number of technical ideas.

Please check & satisfy yourselves.

Thanks for encouragement + understanding.

[III] Interesting Results or General Discussion or Review of Available Information :

"The recent technology developments and innovations improves the life style of people through smart applications, sensors, wireless communication networks, etc., for all those technologies internet is the backbone and the information processing like accessing, distributing the necessary information is achieved through Internet of Things (IoT). IoT supports multi-disciplinary applications as an active entity in engineering, science and business discipline.

Based on the user preference these applications and its services could be framed in IoT. On contrary to the development, IoT has flaws in information processing as huge volume of data is need to be handled in a single environment. Considering these facts, the proposed research work is aimed to develop a novel information processing system in IoT platform through a reliable health care monitoring system.

The effective utilization of big data in IoT environment is analyzed through the proposed architecture to attain minimum delay in a real time environment. Conventional models are used to compare the performance of proposed design and the experimentation is performed to verify the superior performance of proposed approach using accuracy, cost functions in terms of transmission and storage, f-measure, sensitivity and specificity."

[Source - http://dx.doi.org/10.36548/jei.2020.3.006]

“Portable devices that feature Internet connectivity are very common these days. Since Java was created with the idea of running on embedded devices from the beginning, JVM is, yet again, at an advantage here.For memory-constrained systems, Oracle offers the Java ME Embedded platform. It is meant for commercial IoT devices that do not require a standard graphical or console-based user interface.For devices that can spare more memory, the Java SE Embedded edition is available. The Java SE Embedded version is very close to the Java SE discussed in this book. When running a full Linux environment, it can be used to provide desktop GUIs for full user interaction.Both Java ME Embedded and Java SE Embedded platforms can access the **general-purpose ...”** ref[5].

[IV] Additional Information Using Applied Mathematics + JVM Related Software :

[a] https://github.com/yashsmehta/helmholtz-machine

[b] https://www.tensorflow.org/xla

[c] http://www.gatsby.ucl.ac.uk/~dayan/papers/hm95.pdf

[d] https://polly.llvm.org/

[e] https://isabelle.in.tum.de/

[f] https://www.idquantique.com/random-number-generation/overview/

[g] https://qrng.physik.hu-berlin.de/download ; https://github.com/cremno/mruby-libqrng.

[h] https://www.jruby.org/ ; https://www.jython.org/ ;

[i] https://github.com/tejdnk-2019-ShortNotes ;

[j] https://www.ims.fraunhofer.de/en/Business-Unit/Industry/Industrial-AI/Artificial-Intelligence-for-Embedded-Systems-AIfES.html

[V] Acknowledgment/s :

Sincere thanks to all WHO made this happen in my LIFE.Non-Profit R&D.Inspire other always.

[VI] Conclusions + Future Perspectives :

It is our sincere R&D effort to present complicated or Novel Algorithms in a simple way.One of the pioneering efforts in this domain.

Hope more will follow.Rigorous Testing in progress at the time of progress.

[VII] References :

[1] A Novel Information Processing in IoT Based Real Time Health Care Monitoring System August 2020 - Journal of Electronics and Informatics 2(3):188-196 Follow journal;DOI: 10.36548/jei.2020.3.006 - Jennifer S Raj.

[2] https://www.iot-lab.info/legacy/deployment/grenoble/index.html

[3] https://www.oracle.com/in/big-data/what-is-big-data/

[4] https://analyticsindiamag.com/7-most-used-programming-languages-for-iot-projects/

[5] https://www.oreilly.com/library/view/introduction-to-jvm/9781787127944/5ac1c37c-da73-40ee-95b5-5aa88342b239.xhtml

[THE END]