Testing Enzyme Automatic Differentiation Framework w.r.t LLVM & GCCS –>

-> [A Simple Suggestion Using Julia + LLVM & C Programs Generated by Gentile Compiler Construction System + CLIPS – Expert System to Probe Space & Medicine R&D Domains] -> Exploring AI/ML/DL/Minsky Machines Algorithms.
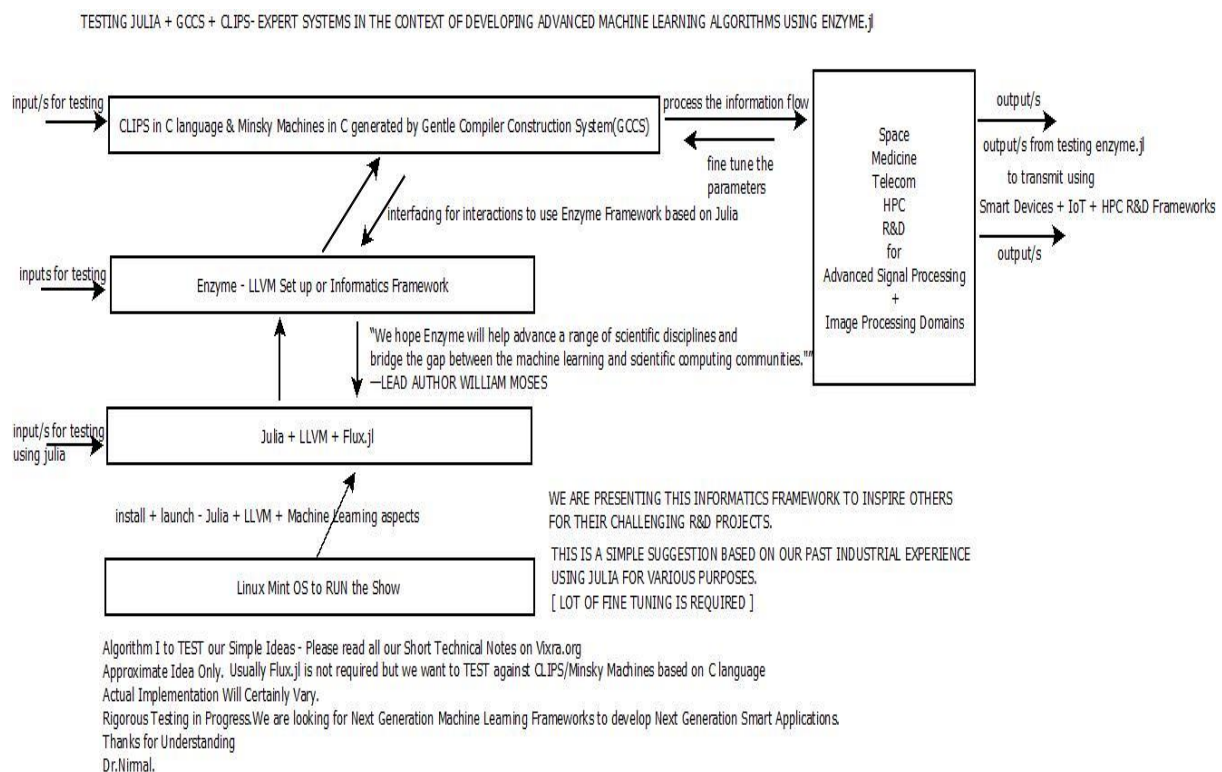
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[I] Main Idea based on our Inspiration :

"We hope Enzyme will help advance a range of scientific disciplines and bridge the gap between the machine learning and scientific computing communities.""—L E A D A U T H O R W I L L I A M M O S E S .

TESTING JULIA + GCCS + CLIPS- EXPERT SYSTEMS IN THE CONTEXT OF DEVELOPING ADVANCED MACHINE LEARNING ALGORITHMS USING ENZYME.jl

input/s for testing → CLIPS in C language & Minsky Machines in C generated by Gentle Compiler Construction System(GCCS)

process the information flow

fine tune the parameters

interfacing for interactions to use Enzyme Framework based on Julia

inputs for testing → Enzyme - LLVM Set up or Informatics Framework

"We hope Enzyme will help advance a range of scientific disciplines and bridge the gap between the machine learning and scientific computing communities.""
—LEAD AUTHOR WILLIAM MOSES

input/s for testing using julia → Julia + LLVM + Flux.jl

install + launch - Julia + LLVM + Machine Learning aspects

Linux Mint OS to RUN the Show

Space Medicine Telecom HPC R&D for Advanced Signal Processing + Image Processing Domains

output/s

output/s from testing enzyme.jl to transmit using Smart Devices + IoT + HPC R&D Frameworks

output/s

WE ARE PRESENTING THIS INFORMATICS FRAMEWORK TO INSPIRE OTHERS FOR THEIR CHALLENGING R&D PROJECTS.

THIS IS A SIMPLE SUGGESTION BASED ON OUR PAST INDUSTRIAL EXPERIENCE USING JULIA FOR VARIOUS PURPOSES.
[LOT OF FINE TUNING IS REQUIRED]

Algorithm I to TEST our Simple Ideas - Please read all our Short Technical Notes on Vixra.org
Approximate Idea Only. Usually Flux.jl is not required but we want to TEST against CLIPS/Minsky Machines based on C language
Actual Implementation Will Certainly Vary.
Rigorous Testing in Progress.We are looking for Next Generation Machine Learning Frameworks to develop Next Generation Smart Applications.
Thanks for Understanding
Dr.Nirmal.

[Figure I – Simple Idea to TEST Enzyme Tool w.r.t C Programs]

[II] Important References :

[a] **https://vixra.org/pdf/1907.0201v1.pdf** **-> Julia Language**

[b] **https://vixra.org/pdf/1901.0445v1.pdf** **-> Minsky Machines**

[c] **https://vixra.org/pdf/1910.0163v1.pdf** **-> Julia Language**

[d] **https://vixra.org/pdf/1908.0073v1.pdf** **-> Julia Language**

[e] **https://vixra.org/pdf/1908.0073v1.pdf** **-> Julia Language**

[f] **https://github.com/wsmoses/Enzyme.jl** **-> Enzyme Software from MIT USA.**

[III] Important R&D Software :

[a] https://juliahub.com/ui/Packages/Flux/QdkVy/0.11.2

[b] https://esolangs.org/wiki/Minsky_machine

[c] https://www.csail.mit.edu/news/more-compatible-coding-machine-learning

[d] http://gentle.compilertools.net

[e] https://llvm.org && https://github.com/maleadt/LLVM.jl

[f] https://en.wikipedia.org/wiki/CLIPS

[g] http://www.clipsrules.net -> CLIPS Expert System in C Language.

"Developed at NASA's Johnson Space Center from 1985 to 1996, the C Language Integrated Production System (CLIPS) is a rule-based programming language useful for creating expert systems and other programs where a heuristic solution is easier to implement and maintain than an algorithmic solution. Written in C for portability, CLIPS can be installed and used on a wide variety of platforms. Since 1996, CLIPS has been available as public domain software."

[h] https://web.media.mit.edu/~minsky/

[IV] Acknowledgement/s :

Sincere Thanks to all WHO made this happen in my LIFE. Non-Profit R&D.

[THE END]