AI will help us visualize things like the interactions of proteins and enzymes -> HaskHOL + Machine Learning.

Nirmal Tej Kumar

Independent Consultant – Informatics/AI/Nanotechnology/HPC-R&D/Applied Mathematics.

R&D Collaborator – USA/UK/Israel/BRICS Group of Nations.

Current Member – ante Inst,UTD,Dallas,TX,USA.

Contact_info – hmfg2014@gmail.com

[I] Abstract :

Exploring + Understanding : { HaskHOL + MxNet-Haskell } libraries for Mathematical & Structural Reasoning in the Context of Protein Folding Machanisms/DNA Sequencing Applications –> An Interesting Machine Learning(ML) Suggestion.

index words/key words : easy to guess.

[II] Inspiration + Main Idea as Simple Presentation :

"It's obvious that AI and machine learning are **the** big fields of software engineering. They'll continue to dominate programming for a long time. They can have an incredible impact on our lives. But by allowing this impact, we're putting more of our safety in the hands of software engineers. This has major implications for how we develop software.

We often have to make tradeoffs between ease of development and reliability. A language like Haskell can offer us a lot of compile time guarantees about the behavior of our program. These guarantees are absent from many other languages. However, achieving these guarantees can introduce more pain into the development process."

[Source - https://mmhaskell.com/machine-learning/ai-native]

[III] R&D Informatics Framework to Design a Simple Algorithm for Protein Folding Mechanisms :

[Similarly we could probe DNA Sequencing also.]

{

- ➔ **Start**
- ➔ **Understand Protein Folding Mechanisms First-> Know/Learn about HaskHOL + ML Libraries**
- ➔ **Start Protein Folding Algorithms e.g. by using Spin Glass Theory**
- ➔ **Perform Protein Folding Tasks with the Algorithms designed.**
- ➔ **Test the Algorithms**
- ➔ **Fine tune the BIG DATA**
- ➔ **Check the R&D output for further analysis.**
- ➔ **Print the output/s.**
- ➔ **STOP.**

}

[Figure I – Algorithm I – Simple Algorithm – Additionally Please Check our Technical Notes (((via))) Vixra.org]

** Please Note -> We are testing with -> HaskHOL + MxNet-Haskell.

** There could be other options as well. Also Please Check Haskell/AI Related Concepts/Bio-Haskell.

[IV] References :

[a] https://www.zmescience.com/medicine/genetic/protein-folding-alphafold-03122018/

[b] https://foldingathome.org

[c] https://github.com/ecaustin/haskhol-math/blob/master/src/HaskHOL/Math.hs

[d] https://mmhaskell.com/blog/2017/8/7/the-future-is-functional-haskell-and-the-ai-native-world

[e] https://wiki.haskell.org/AI

[f] https://mmhaskell.com/machine-learning - Check for Machine Learning + AI

[h] http://www.scienpress.com/Upload/JAMB/Vol%202_2_6.pdf

[i] https://vixra.org/abs/1907.0195 && https://vixra.org/abs/1901.0157 && https://vixra.org/abs/1901.0027

[V] Conclusions With Future Perspectives : An Excellent Bio-informatics Platform is presented.

[VI] Acknowledgment/s : Sincere Thanks to all my Mentors + Friends + Collaborators. Non-Profit R&D Only.

[THE END]