Understanding ImageAI & SA-Diagnet : Self-Attention based Network For Diagnosing Histopathological Images w.r.t Python + Dr.Racket & Redex + Polly LLVM Using : Smart Devices [SD] + IoT + HPC Systems -> A Simple Suggestion & Short Technical Note.

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[I] Main Idea + Inspiration + Introduction :

"HATNet: Self-attention-based end-to-end network for diagnosing histopathological images This repository contains the source code of our work for classifying histopathological images using [hollistic attention network (HATNet)](https://arxiv.org/abs/2007.13007). Briefly, we introduce an attention-based network to classify breast biopsy images. We streamline the histopathological image classification pipeline and show how to learn representations from gigapixel size images end-to-end. Our network extends the bag-of-words approach and uses self-attention to encode global information, allowing it to learn representations from clinically relevant tissue structures without **any explicit supervision**.

[Source -> https://github.com/sacmehta/HATNet#readme]

https://drops.dagstuhl.de/opus/volltexte/2014/4565/pdf/13.pdf -> Very much interesting to probe novel ideas involving Python + Dr.Racket.

[II] Our Simple R&D Algorithm I to Probe the Medical Images :

We are TESTING our R&D Algorithms Using Python + Dr.Racket/Redex with some interesting results.

Kindly use our Algorithms presented in the references section below to modify as per your R&D requirements.

Please generate your own Informatics Framework.Not a straight forward method.Please Check & Satisfy Yourselves.

Written in Free Style.Thanks.

[III] Important & Useful References :

[a] https://github.com/sacmehta && https://github.com/tejdnk-2019-ShortNotes

[b] https://github.com/tejdnk-2019-ShortNotes/2021-Nir-Informatics/blob/main/Nirmal-Python-Med-Img-Framework-2021.pdf*

[c] https://github.com/tejdnk-2019-ShortNotes/2021-Nir-Informatics/blob/main/OCaml-C-llvm-Inceptionv3-Nir-21.pdf*

[d] https://github.com/tejdnk-2019-ShortNotes/2021-Nir-Informatics/blob/main/RKT-Java-VDSL-MedImg-Nir-21.pdf*

[e] https://racket-lang.org/ && https://docs.racket-lang.org/redex/

[f] https://fenix.tecnico.ulisboa.pt/downloadFile/844820067123802/resumo.pdf

[g] https://www.python.org/ ; [h] https://polly.llvm.org/ ; [i] http://imageai.org/ [j] https://deepstack.cc/

[IV] Acknowledgment/s:

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

[V] Conclusion/s With Future Perspectives :

An Excellent Image Processing Environment to Probe Medical Images Using Dr.Racket & Python.One of the pioneering R&D Efforts to the best of our knowledge.Hope many more will follow.Since this is a short technical note we are not going into the details.Rigorous Testing in Progress @ the TIME of Submission.Thanks for your encouragement & understanding our efforts.

Do not forget to explore this wonderful work :

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@misc{mehta2020hatnet,title={HATNet: An End-to-End Holistic Attention Network for Diagnosis of Breast Biopsy Images},
  author={Sachin Mehta and Ximing Lu and Donald Weaver and Joann G. Elmore and Hannaneh Hajishirzi and
  Linda Shapiro},year={2020},eprint={2007.13007},archivePrefix={arXiv},primaryClass={cs.CV}}
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[THE END]