An Insight into Ruby Programming Language based Probing of Scientific Imaging Informatics Framework –An Interesting Simple Suggestion for Rapid Prototyping of Algorithms.

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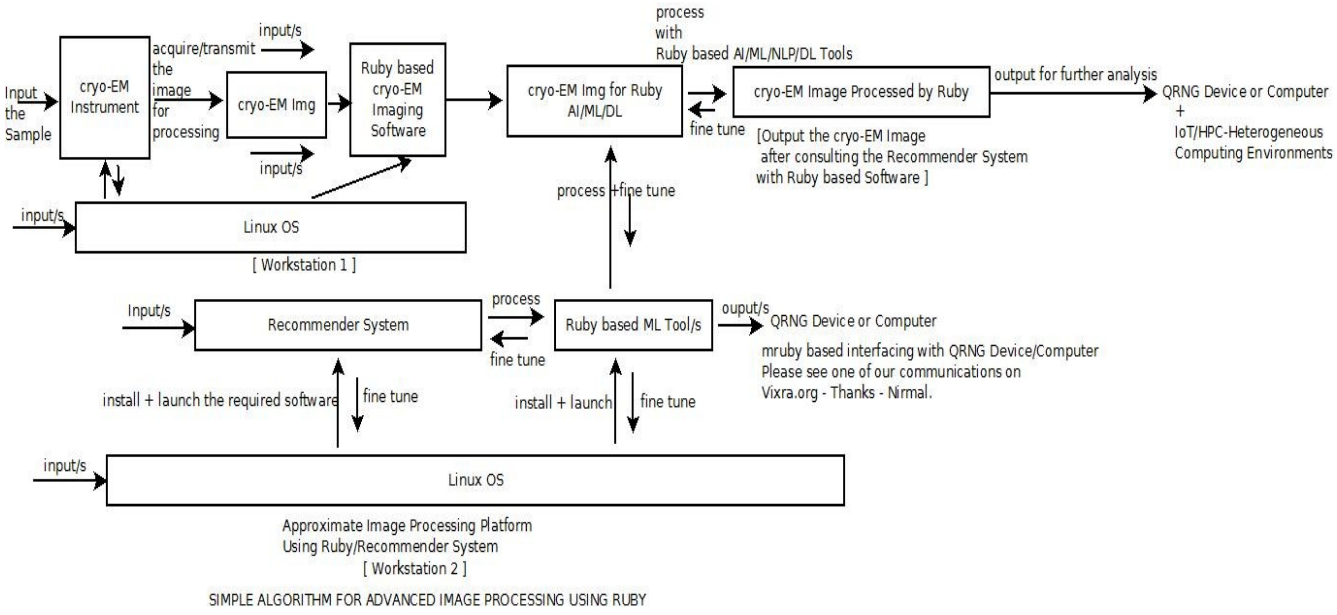
[I] Inspiration + Introduction :

A Technical Communication on Understanding & Exploring [Recommender Systems + Machine Learning(ML) + NLP + QRNG/mruby+Smart Devices+IoT/HPC-High Performance Computing] in the Context of Advanced Scientific Imaging Algorithms towards Software R&D Using Ruby –> [Designing + Developing + Testing] Heterogeneous Computing Environments.

{ https://www.semanticscholar.org/ - COVID 19 Information is our inspiration } ------→

[II] Informatics R&D Framework Using Ruby :



[Figure I – Algorithm I – Electron Microscopy Imaging & Informatics Framework]
Could be useful in probing COVID-19 Related Nano-Bio Material Systems.

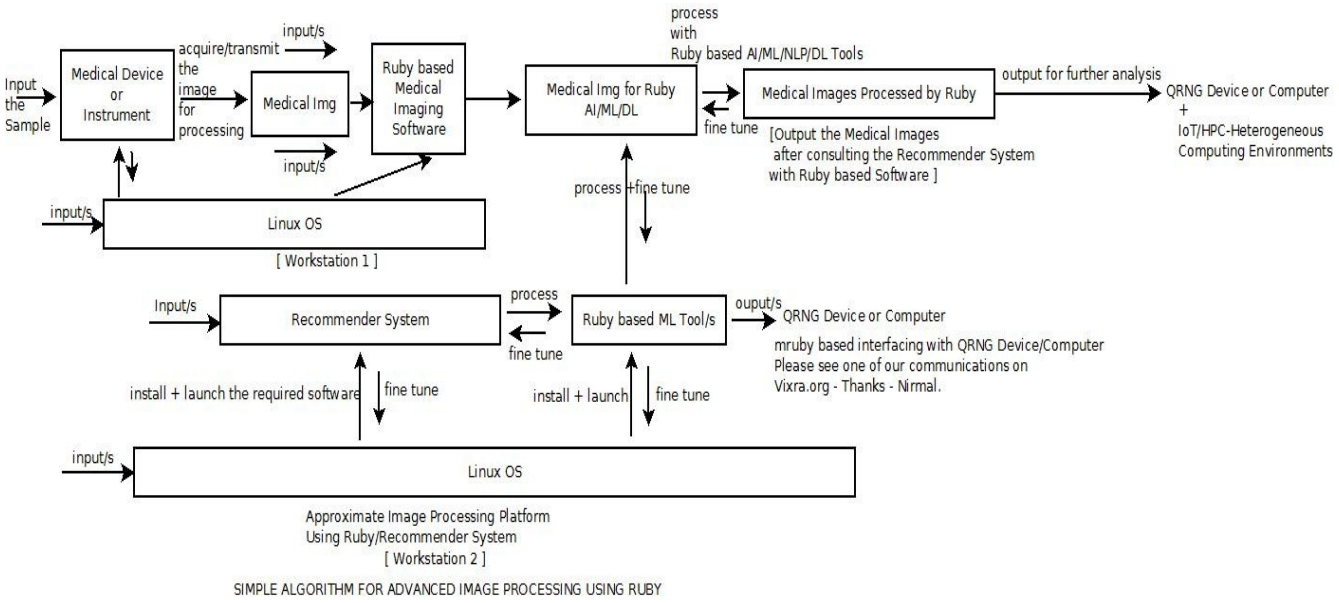
" Set of programs for the analysis of "helical" objects with or without a seam. Ruby-Helix is built on top of the Ruby programming language and is the first implementation of asymmetric helical reconstruction for practical image analysis. It also allows easier and semi-automated analysis, performing iterative unbending and accurate determination of the repeat length." - Ruby based Image Processing Solution.

Primary Publication/s to Read :

- **Metlagel Z, Kikkawa YS, Kikkawa M (January 2007). "Ruby-Helix: an implementation of helical image processing based on object-oriented scripting language".** ***J. Struct. Biol.*** **157 (1): 95–105. doi:10.1016/j.jsb.2006.07.015. PMID 16996276.**
- **Kikkawa M (October 2004). "A new theory and algorithm for reconstructing helical structures with a seam".** ***J. Mol. Biol.*** **343 (4): 943–55. doi:10.1016/j.jmb.2004.08.051. PMID 15476812.**

[Interesting Source - https://en.wikibooks.org/wiki/Software_Tools_For_Molecular_Microscopy#Ruby-Helix]

A Short & Simple Technical Communication on Algorithms Design Using Python Based [Applied Physics+AI+Imaging Mathematics+Data Bases] → Image Processing Software R&D – by Nirmal Tej Kumar on Vixra.org.



[Figure II – Algorithm II – Medical Imaging & Informatics Framework]
Could be useful in probing COVID-19 Related Medical Image Processing.

[III] Information on Publications/Other Reading Materials involving Mathematics+Software :

[a] https://otobrglez.opalab.com/ruby/2014/03/23/simple-ruby-recommendation-system.html*

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

[c] https://www.semanticscholar.org/author/Nirmal-Kumar/12354503/suggest *****

[d] *https://www.sitepoint.com/ruby-on-medicine-converting-dicom-to-jpg*

[e] *dicom.github.io/ruby-dicom/publications.html*

[f] *https://github.com/sween/mongodicom* && ***dicom**.github.io/**ruby-dicom***

[IV] Our Short Communications & Suggestions ((((via)))) Vixra.org :

[a] http://www.vixra.org/author/nirmal

[b] http://www.vixra.org/author/d_n_t_kumar

[c] http://www.vixra.org/author/n_t_kumar

[d] http://www.vixra.org/author/nirmal_tej_kumar

[V] Acknowledgment/s :

Special Thanks to all my Mentors+Friends+Collaborators for their sincere encouragement. Non-Profit R&D.

[VI] Conclusion/s With Future Perspectives :

We suggest and present a simple implementation of Advanced Scientific Image Processing Ruby based Framework in this Short Technical Note.Thanks for reading our notes.Ruby is very useful in rapidly prototyping advanced ideas.
Further,we mention here that, C/C++ based extensions with Ruby are just a breeze in implementing already existing Algorithms.mruby is useful with Specialized Hardware for example –> qrng devices+services mentioned in our paper.
This communication is one of the pioneering efforts in these challenging R&D Domains to the best of our knowledge.

[VII] Related Important References :

[a] Corpus ID: 208089759 -------- **From Semantics Scholar*****

[b] Corpus ID: 191557836

[c] Corpus ID: 64929364

[d] Corpus ID: 195513465

[e] Corpus ID: 65034309

[f] Corpus ID: 203149755

[g] Corpus ID: 86511402

[h] Corpus ID: 202779270

[i] Corpus ID: 204664737

[THE END]