

# Ruby based exploration of Medical Imaging Using Imaging Mathematics + Algorithms -> An Interesting Short Technical Note.

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## [I] Main Idea + Inspiration :

Ruby in the Context of Restricted Boltzmann Machines + Image Processing + QRNG -> Designing Advanced Medical Imaging Platforms involving MRI/X-Ray/Ultrasound CT Scans etc.. – A Simple R&D Suggestion Using Bayer Pixels + Other related Pixel Concepts.Exploring FFT Concepts/Restricted Boltzmann machines in quantum physics as Mathematical Tools to develop Recommender Systems.

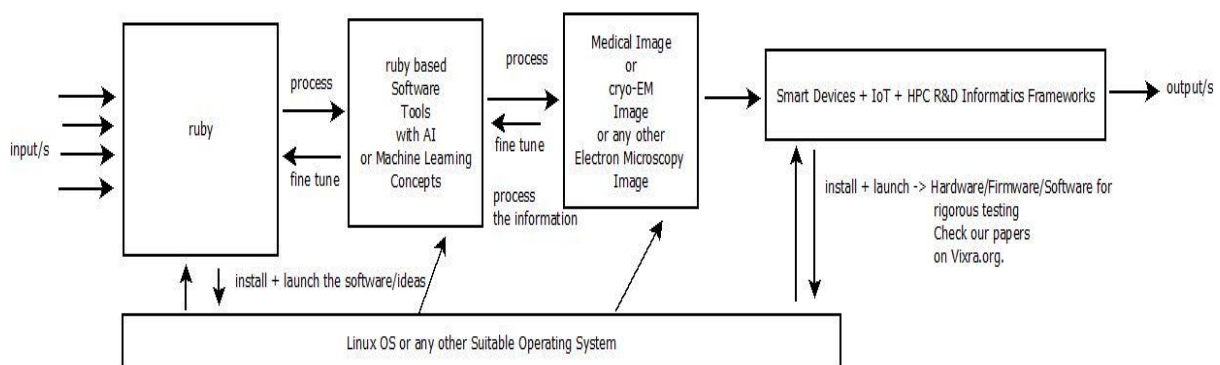
“An image typically consists of a rectangular region of pixels and metadata. To convert, edit, or compose an image in an efficient manner, we need convenient access to any pixel anywhere within the region (and sometimes outside the region). And in the case of an image sequence, we need access to any pixel of any region of any image in the sequence. However, there are hundreds of image formats such JPEG, TIFF, PNG, GIF, etc., that makes it difficult to access pixels on demand”. => [ <https://imagemagick.org/script/architecture.php#authentic-pixels>]

## [II] Ruby – DICOM – Medical Imaging Platform Informatics Framework :

A SIMPLE SUGGESTION ON DESIGNING + DEVELOPING ADVANCED IMAGE PROCESSING FRAMEWORKS

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A Simple R&D Suggestion Using Bayer Pixels + Other related Pixel Concepts.Exploring FFT Concepts/Restricted Boltzmann machines in  
quantum physics as Mathematical Tools to develop Recommender Systems.

ImageMagick/RMagick + Other tools were used to TEST our Algorithms.



Approximate Informatics Framework to RUN the Advanced Image Processing  
Testing in Progress  
Ruby programming language has given us promising results so far  
hence this simple idea and suggestion.  
Please Check our Short Communications + Technical Notes on Vixra.org  
Thanks for understanding - Dr.Nirmal.

[ Figure I – Our Simple Idea based on RBM + other ruby Tools -> Recommender Systems ]

ref [b]

### **[III] Important & Useful References :**

- [a] <https://github.com/tejdnk-2019-ShortNotes>
- [b] <https://imagemagick.org/script/architecture.php#authentic-pixels>
- [c] <https://www.sitepoint.com/ruby-on-medicine-converting-dicom-to-jpg/>
- [d] <https://awesome-ruby.com/>
- [e] <https://imagemagick.org/script/magick-core.php>
- [f] <https://github.com/sfikas/medical-imaging-datasets>
- [g] <https://hokstad.com/compiler>
- [h] <https://github.com/cremno/mruby-libqrng>
- [i] <https://structure.m.u-tokyo.ac.jp/English/software/Ruby-Helix-Page/ruby-helix.html>

### **[IV] Acknowledgement/s :**

Sincere Thanks to all WHO made this happen in my LIFE. Non-Profit R&D.Inspiring others to advance in this dynamic field of Image Processing focusing on Medicine & Nanotechnology Domains.

### **[V] Conclusions With Future Perspectives :**

A Simple Suggestion is presented to inspire others using ruby + Image Processing Methods based on 'Pixel Research' using 'Imagemagick' Software Tool.

**[ THE END ]**