Racket, the Programming Language + JikesRVM - Research Virtual Machine [RVM] / Java / Prolog / Imaging Mathematics/QRNG Concepts To Probe Electron Microscopy [EM] Images + Medical Images [MRI Scans] w.r.t Smart Devices + IoT + HPC Heterogeneous Systems.

[Exploring Advanced Imaging + Video Processing Algorithms Using Java + JLang/LLVM + Racket + ProfessorJ: Java in Racket + **z3-rkt]**

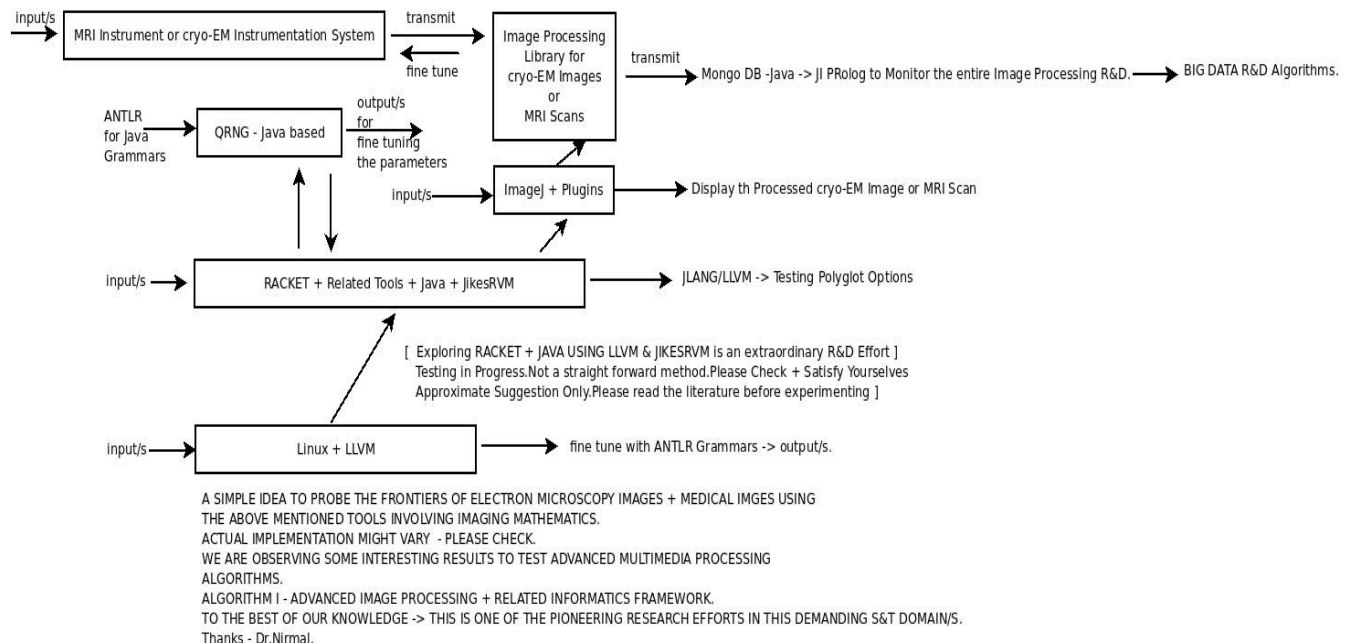Nirmal – Informatics R&D – USA/UK/Israel/BRICS Group of Nations.
Current Member – ante Inst UTD Dallas TX USA.
Contact_info - hmfg2014@gmail.com
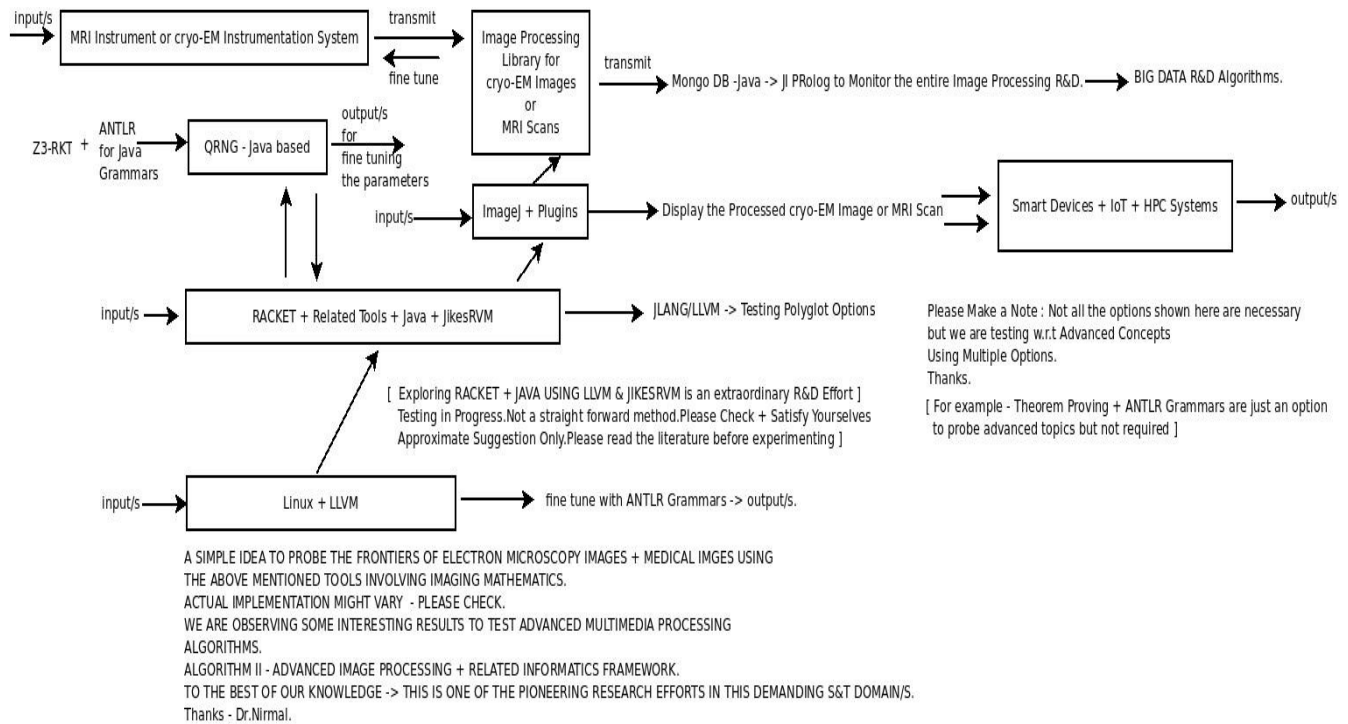
[I] Main Idea + Inspiration + Introduction :

Our TITLE is enough for you to guess. Racket + Java → is an Excellent Combination.

[II] Racket + Java + Related Informatics Framework → Image Processing + Video Applications :

[Figure I – Algorithm I – RACKET + JAVA + LLVM + JIKESRVM Framework]

Please Check → This is not a Straight Forward Method.

The diagram contains the following labels:

input/s → MRI Instrument or cryo-EM Instrumentation System — transmit → Image Processing Library for cryo-EM Images or MRI Scans — transmit → Mongo DB -Java -> JI PRolog to Monitor the entire Image Processing R&D. → BIG DATA R&D Algorithms.

fine tune

Z3-RKT + ANTLR for Java Grammars → QRNG - Java based — output/s for fine tuning the parameters

ImageJ + Plugins — input/s → Display the Processed cryo-EM Image or MRI Scan → Smart Devices + IoT + HPC Systems → output/s

input/s → RACKET + Related Tools + Java + JikesRVM → JLANG/LLVM -> Testing Polyglot Options

Please Make a Note : Not all the options shown here are necessary but we are testing w.r.t Advanced Concepts Using Multiple Options. Thanks.

[For example - Theorem Proving + ANTLR Grammars are just an option to probe advanced topics but not required]

[Exploring RACKET + JAVA USING LLVM & JIKESRVM is an extraordinary R&D Effort] Testing in Progress.Not a straight forward method.Please Check + Satisfy Yourselves Approximate Suggestion Only.Please read the literature before experimenting]

input/s → Linux + LLVM → fine tune with ANTLR Grammars -> output/s.

A SIMPLE IDEA TO PROBE THE FRONTIERS OF ELECTRON MICROSCOPY IMAGES + MEDICAL IMGES USING THE ABOVE MENTIONED TOOLS INVOLVING IMAGING MATHEMATICS.
ACTUAL IMPLEMENTATION MIGHT VARY - PLEASE CHECK.
WE ARE OBSERVING SOME INTERESTING RESULTS TO TEST ADVANCED MULTIMEDIA PROCESSING ALGORITHMS.
ALGORITHM II - ADVANCED IMAGE PROCESSING + RELATED INFORMATICS FRAMEWORK.
TO THE BEST OF OUR KNOWLEDGE -> THIS IS ONE OF THE PIONEERING RESEARCH EFFORTS IN THIS DEMANDING S&T DOMAIN/S.
Thanks - Dr.Nirmal.

[Figure II – Algorithm II – RACKET + JAVA + LLVM + JIKESRVM Framework]
Please Check → This is not a Straight Forward Method.

[III] Useful + Important References :

[a] https://racket-lang.org/

[b] https://polyglot-compiler.github.io/JLang/

[c] https://docs.racket-lang.org/profj/index.html

[d] https://www.jikesrvm.org/ && http://www.jiprolog.com/

[e] http://web.mit.edu/racket_v612/amd64_ubuntu1404/racket/doc/teachpack/image.html

[f] https://lang.video/index.html && https://github.com/philnguyen/z3-rkt/tree/master/README.md

[g] https://www.idquantique.com/random-number-generation/overview/

[IV] Acknowledgment/s : Sincere Thanks to all WHO made this happen in my LIFE.
Inspiring Others is GOOD always.
Non-Profit R&D.

[THE END]