Exploring Firmware Development w.r.t Very Large-scale Embedded Systems: Focusing on R&D Algorithms for Advanced Testing of Complex Firmware -> Targeting: Space + Medicine + Telecoms + HPC/IoT Systems Domains.

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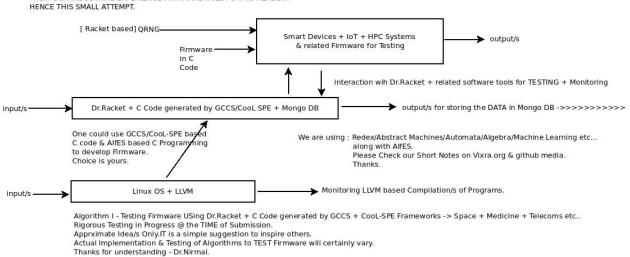
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## [A] Main Idea + Inspiration + Introduction :

https://link.springer.com/content/pdf/10.1007/s10664-017-9524-2.pdf

## [B] R&D Informatics Framework to TEST Firmware:

A COMPLEX FIRMWARE TEST BED TARGETING -> AI BASED EMBEDDED SYSTEMS w.r.t SPACE + MEDICINE + TELECOMS + HPC SYSTEMS RESEARCH DOMAINS ONE OF THE PIONEERING EFFORTS IN THIS HIGHLY CHALLENGING DOMAIN. FIRMWARE TESTING IS TOUGH SO WE ARE SUGGESTING SOME NOVEL METHOD TO TROUBLE SHOOT FROM OUR INDUSTRIAL EXPERIENCE FIRMWARE FAILS FOR NO REASON.



[ Figure I - Algorithm I - Complex Firmware Testing w.r.t AI based Embedded Systems Using Racket + AIfES + GCCS ]

## [C] Important & Useful References :

- [i] http://gentle.compilertools.net/applications.html
- [ii] https://www.ims.fraunhofer.de/en/Business-Unit/Industry/Industrial-AI/Artificial-Intelligence-for-Embedded-Systems-AIfES.html

This is a Short Technical Communication hence we are not covering all the technical details of implementation here.

- [iii] https://docs.racket-lang.org/redex/index.html
- $[iv] \ https://github.com/tejdnk-2019-ShortNotes-Plenty \ of \ Examples-Thanks \ for \ Understanding-Dr. Nirmal.$
- $\textbf{[D] Acknowledgment/s:} \ Sincere \ Thanks \ \& \ Best \ Wishes \ to \ all. Non-Profit \ R\&D. Inspire \ others \ always.$
- **[E] Conclusions With Future Perspectives :** Very interesting general approach R&D -> Targeting Complex Embedded Systems w.r.t Firmware Using Dr.Racket + C Programming Language generated by the GENTLE Compiler System Language & Framework.