Exploring De Bruijn's ideas on the Formalization of Mathematics → To Probe Gene Chips Design + Verification Using CAKEML/HOL-Isabelle Theorem Prover.

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[I] Idea + Implementation :

Probing Gene Chips Design Using CAKEML.Theoretical Research Work in Progress.

Please Check ref[b] for more inspiration.

https://www.bbc.com/news/world-us-canada-53956683 - Neuralink: Elon Musk unveils pig with chip in its brain.

From Indexing Data Structures to de Bruijn Graphs ? → Bastien Cazaux et al.

https://doi.org/10.1101/2020.12.20.423642 → Super-robust data storage in DNA by de Bruijn graph-based decoding.

We have presented some ideas Using HOL - Isabelle System + Gene Chip Design before.

Try to derive and present your own Gene Chip Informatics Framework.

"In CakeML, De Bruijn indices are more sophisticated than in lambda calculus, as there is more than one way to bind a variable and a richer syntax ". → ref[d]

[II] Important Reference/s :

[a] https://www.cs.ru.nl/~herman/talk-FOMCAF.pdf

[b] http://www.scienpress.com/Upload/JAMB/Vol%202_2_6.pdf

[c] https://cakeml.org

[d] http://publications.lib.chalmers.se/records/fulltext/251308/251308.pdf

[e] https://github.com/tejdnk-2019-ShortNotes

[f] https://github.com/tejdnk-2019-ShortNotes/tejdnk-Space-Medicine-Informatics-github.io/blob/master/Nirmal-Rust-CakeML-2021.pdf

[g] A Verified Compiler from Isabelle/HOL to CakeML - https://lars.hupel.info/research/codegen/

[III] Acknowledgment/s : Non-Profit R&D. Inspire Others Always.

[THE END]