The Windows Concept Journey — WRK (Windows Research Kernel)

2 min read · Dec 4, 2024

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WRK (Windows Research Kernel) is a portion of the source code of "Windows XP"\"Windows 2003 Server" service pack 1 (2005 edition) — as shown in the screenshot below. The main usage of WRK was in universities\academies\scientific centers for investigating\researching the Windows NT kernel structure and working principles (https://betawiki.net/wiki/Windows_Research_Kernel). Using WRK we could extend the operating system for further research like implementing a new system call (https://osm.hpi.de/wrk/2007/07/howto-implementation-of-new-system-service-calls/).

Overall, using the WRK's guidelines we could build the kernel for x84/x64. However, the kernel is not enough but the rest of the Windows OS was not distributed with WRK (https://blog.adamfurmanek.pl/2018/07/21/windows-research-kernel-part-1/index.html). Also, WRK includes source for processes, threads, LPC, virtual memory, scheduler, object manager, I/O manager, synchronization, worker threads, kernel heap manager and other core NTOS functionality (https://www.academicresourcecenter.net/curriculum/pfv_ID_7366.html).

Lastly, WRK has been part of the “Windows Academic Program” which supplied universities with concert\code\projects for integrating Windows kernel technologies for teaching\researching. Beside WRK the program includes also CRK (Windows Curriculum Resource Kit) and ProjectOZ experimental environment — more on those in future writeups (https://web.archive.org/web/20130624215459/http://www.microsoft.com/education/facultyconnection/articles/articledetails.aspx?cid=2416&c1=en-us&c2=0).

See you in my next writeup ;-) You can follow me on twitter — @boutnaru (https://twitter.com/boutnaru). Also, you can read my other writeups on medium — https://medium.com/@boutnaru. You can find my free eBooks at https://TheLearningJourneyEbooks.com.

https://betawiki.net/wiki/Windows_Research_Kernel

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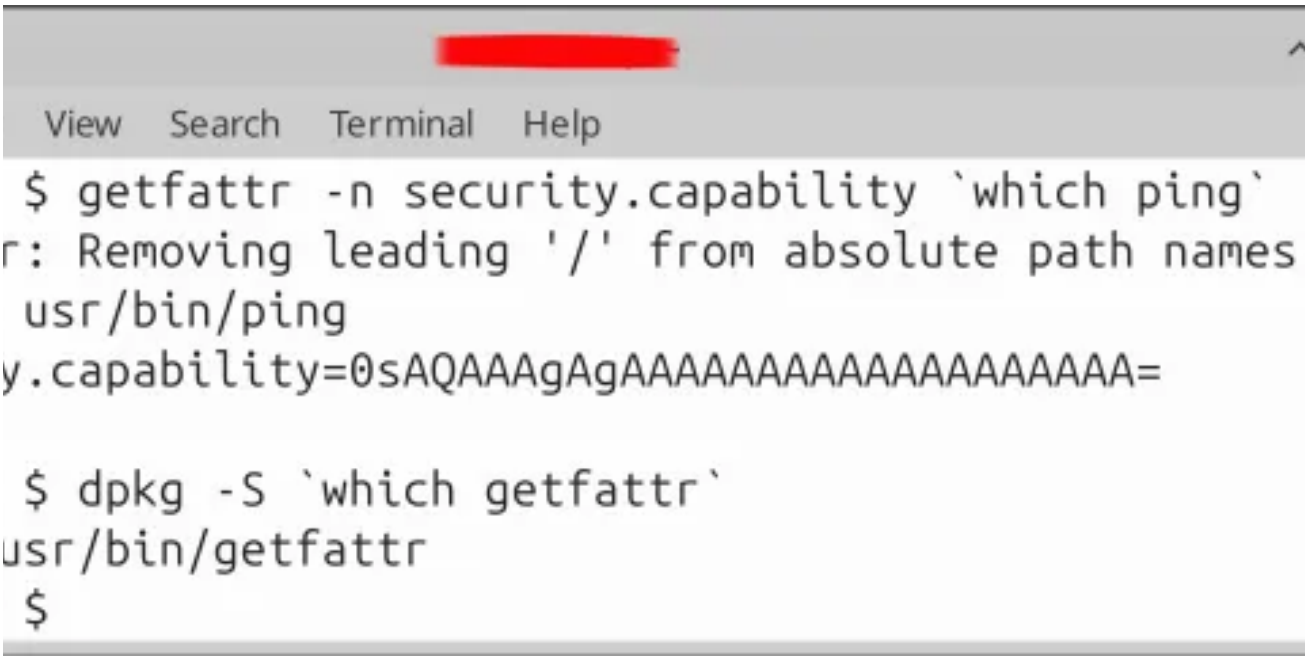

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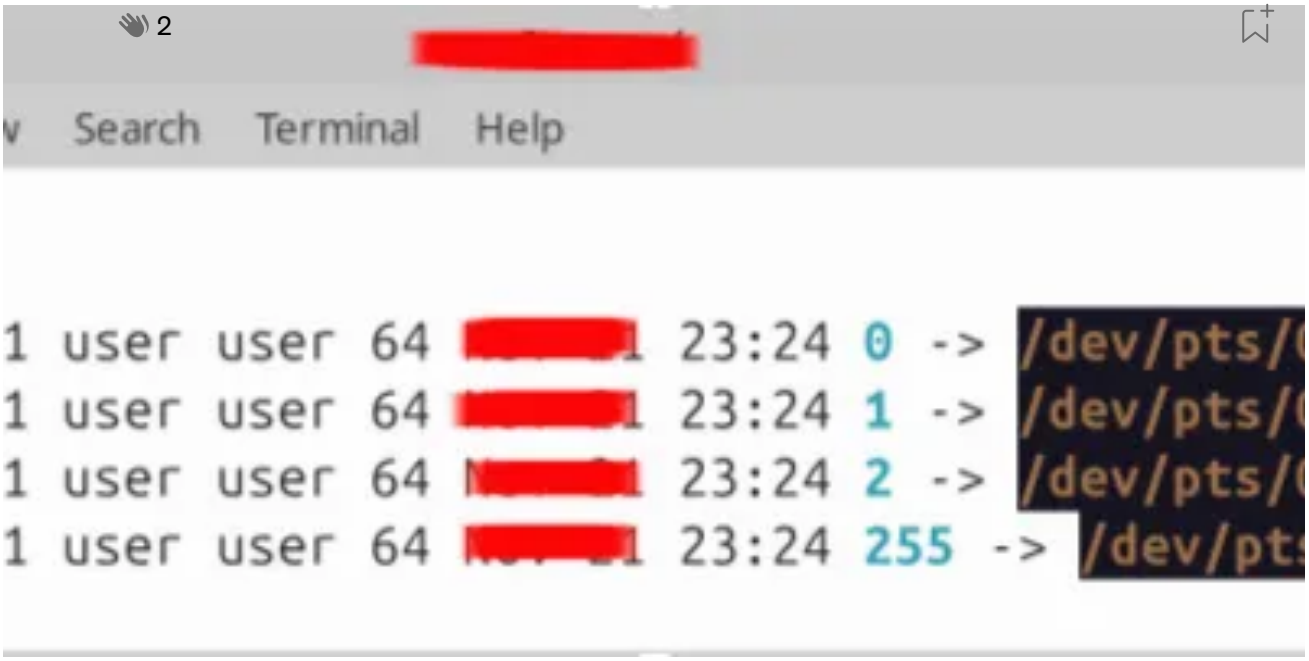

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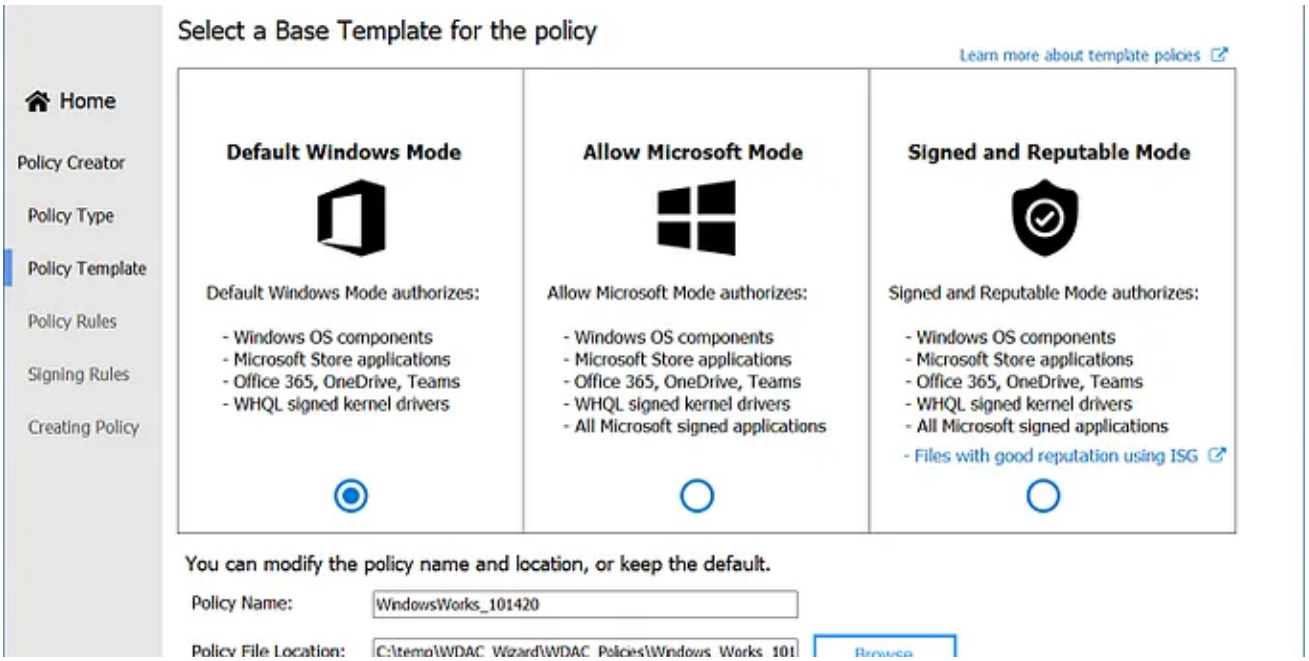

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The Windows Security Journey — Differences between “WDAC” and “AppLocker”

In general, both AppLocker (https://medium.com/@boutnaru/the-windows-security-journey-applocker-application-locking-b9547fb9cbbd) and WDAC...

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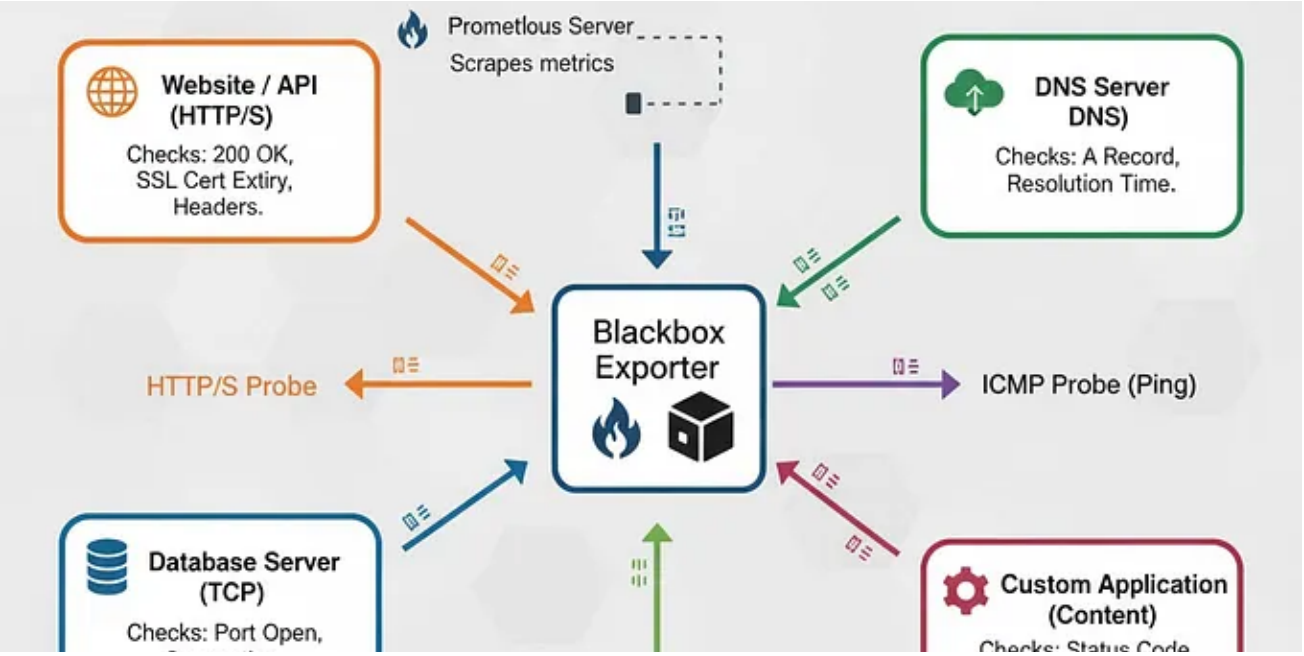

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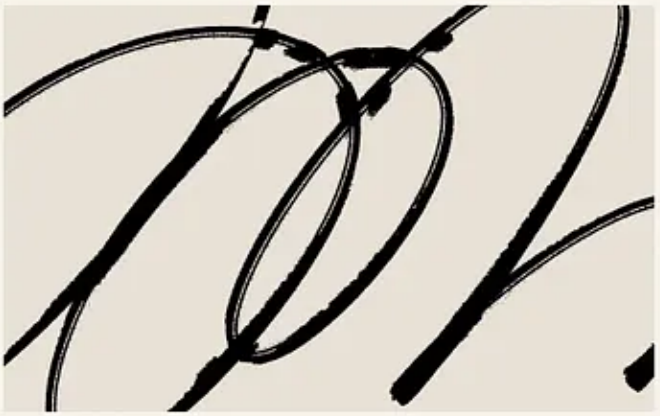

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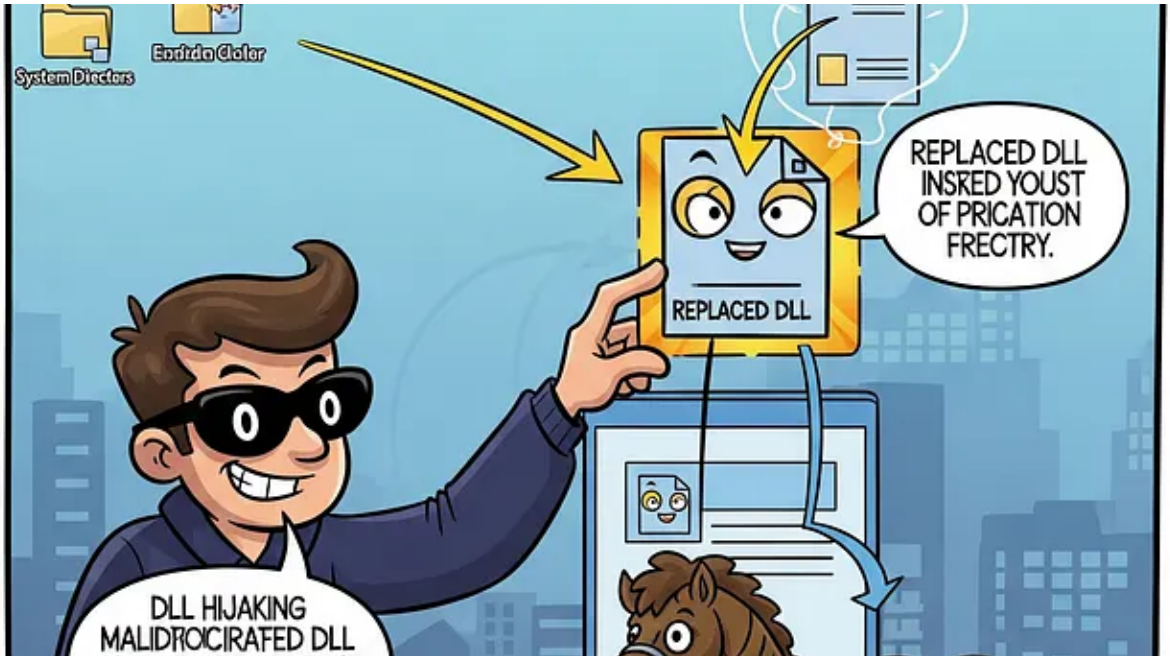

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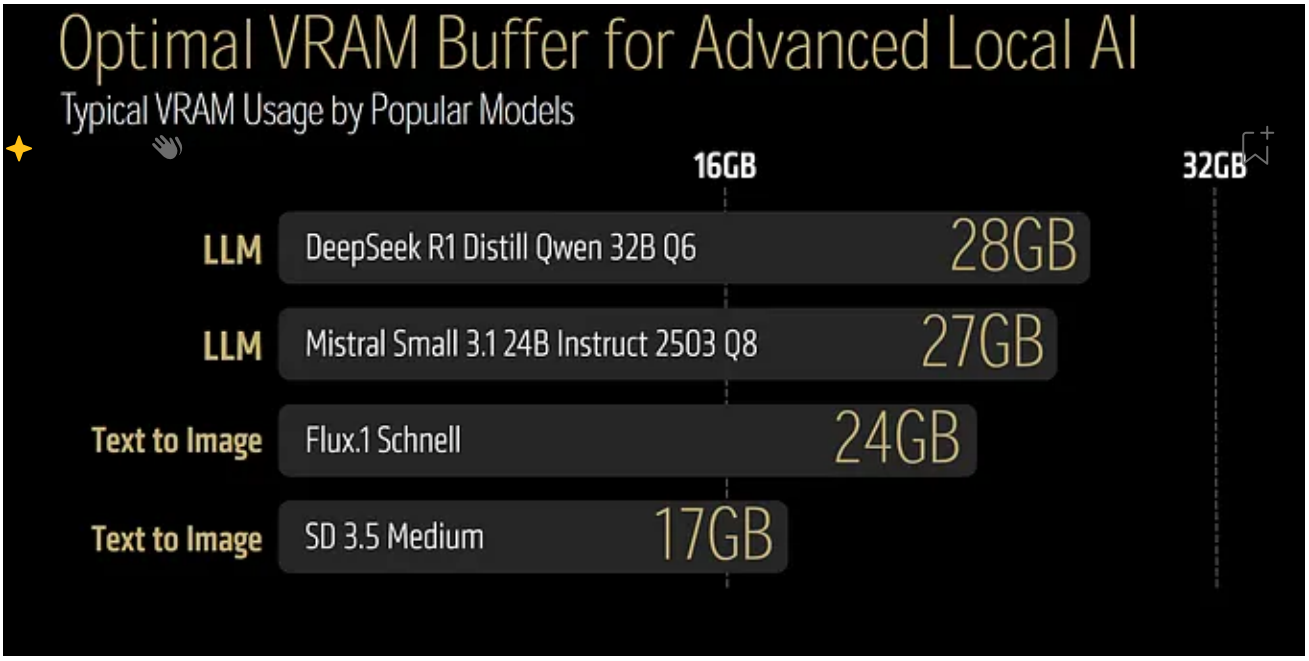

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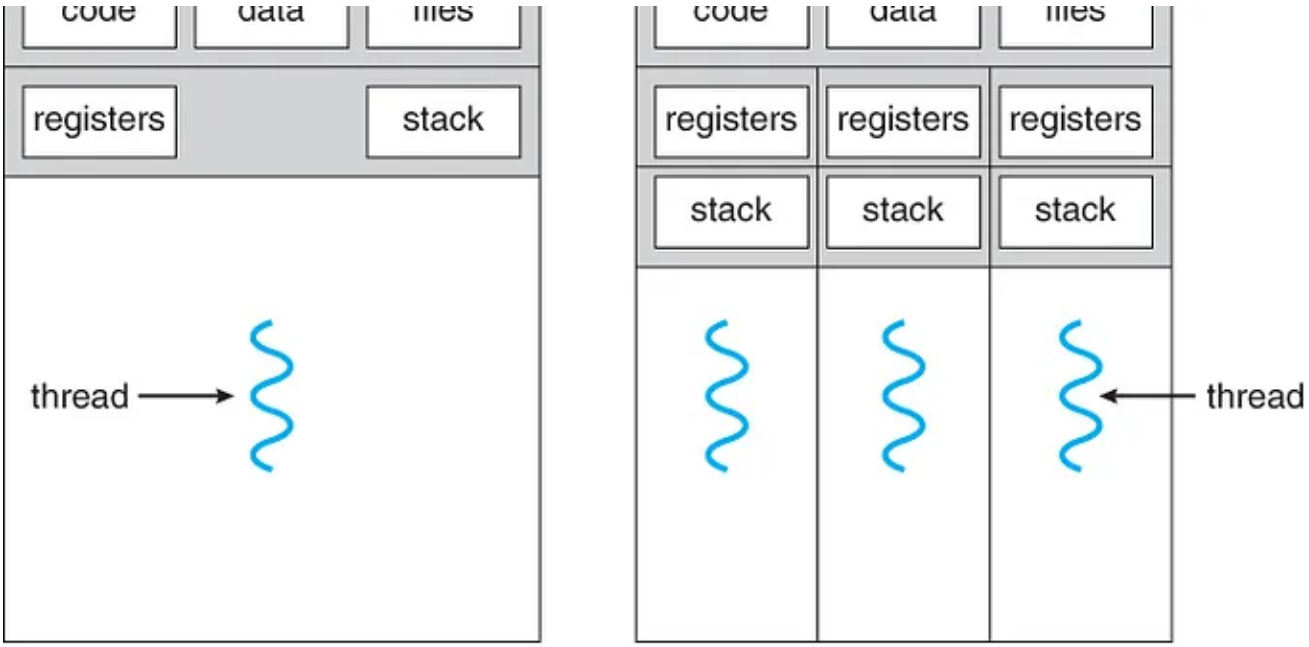

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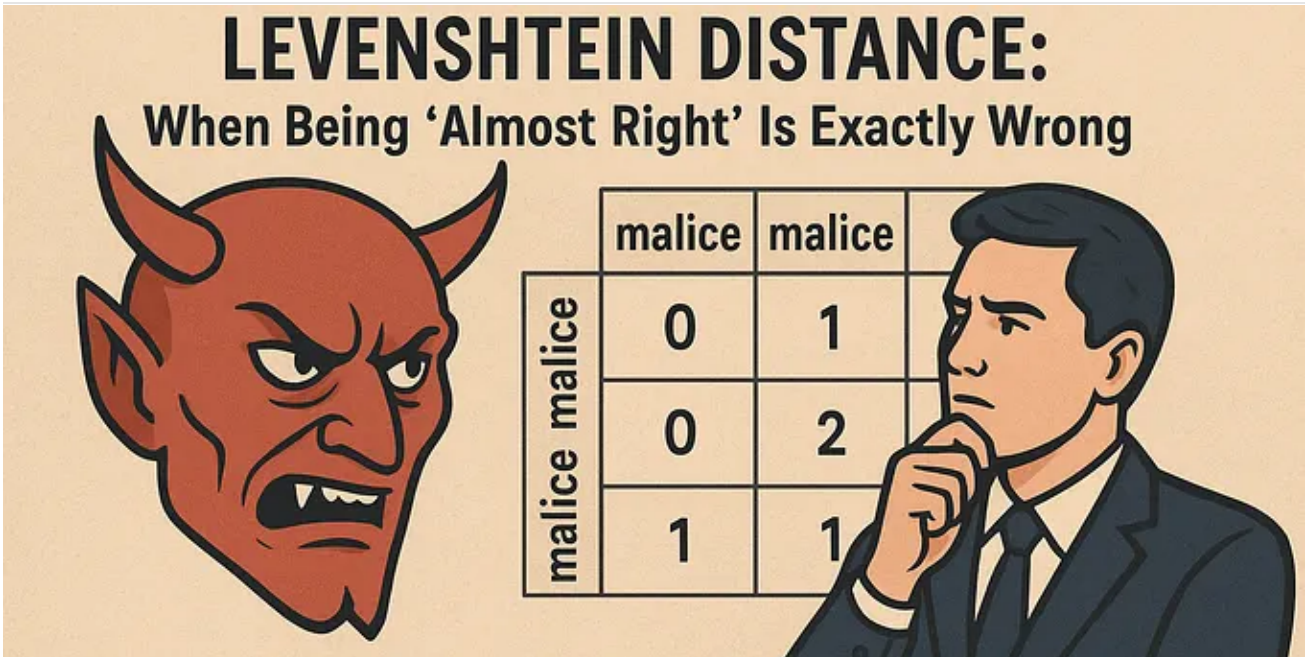

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