

(January 20th, 2026)

If you know someone who would benefit from being an Insider, feel free to forward this PDF to them so they can sign up [here](#).



Note: As an Insider, you can read all prior Insider newsletters [here](#).

Quick Tips for our Insider friends!

This newsletter is coming to you from Redmond, where I've been rebooting two hobbies: electronics and computer graphics – both long-neglected and giving me great joy to restart and relearn – so much information to dredge up from the depths of memory! It's involved much wrangling of old software and hardware to work with Windows 10 and 11 – especially getting USB-to-COM adapters to work!

As well as working with Joe on his next Vector Search in Practice course, I've also started collecting content for a course of my own around my popular Mythbusters theme, and working with Jonathan and Kimberly on their courses. Content, content, content!

NEW COURSE: AIVSE: SQL Server 2025 Vector Search Essentials

We're tremendously excited to be developing a library of AI-focused courses, as well as new courses focused on traditional SQL Server topics, all based on SQL Server 2025 and Azure SQL Database. Joe Sack is back with us and he gets the honors for our first new course: AIVSE: Vector Search Essentials.



This online course provides a comprehensive introduction to vector search capabilities in SQL Server 2025 and Azure SQL Database. Designed for SQL Server DBAs and developers, you'll learn why traditional search methods fall short for semantic queries and how vector search solves

these challenges. Through detailed explanations and demonstrations using a property search scenario, you'll gain the foundational knowledge needed to evaluate and implement vector search in your own environments.

More information about the course is [here](#).

It's available for one-year and lifetime access in our revamped [shop](#). If you're a Blackbelt Lifetime subscriber, login and use the discount code 'bbai' to save \$100 on the price (it automatically checks your SQLskills account email), otherwise, as a newsletter subscriber use the coupon 'newsai' to save \$50.

Kimberly and AIJoe Talk Tech: New Podcast

Kimberly *did* retire but she still loves talking tech, and you know that Joe came back to SQLskills to work on courses and do AI Consulting. The two were talking tech again and decided they'd record their chats!

They're just getting their feet wet with the first few but four are already posted. They don't know if they'll always release weekly but they're having so much fun we'll just have to see how often they happen! For now, they're planning on **at least** one per month!

Check them out [here](#)!

Book Review

Hopefully you had a look at my [2025: the year in books](#) post to pick up some ideas for reading in 2026. Here are a couple more for you from the first two weeks of January...

Firstly, Brian Lavery's [*Empire of the Seas: How the Navy Forged the Modern World*](#). Lavery has written a few books about the Royal Navy, including one on many of the fabulous ship models in the Greenwich Maritime Museum in London which I didn't [know about](#) and just ordered! This book is a somewhat high-level history of the development of the Royal Navy, from the late 1500s (defeat of the Spanish Armada) through the end of WWI (submarine warfare and the inconclusive Battle of Jutland). Lots of good asides, contemporary paintings, and images, and I learned a few things. Excellent!

Secondly, [*The Phantom Atlas: The Greatest, Myths, Lies and Blunders on Maps*](#) by Edward Brooke-Hitching. I'm a huge cartophile and so this was an extremely interesting book. I'd heard of a few of these phantoms, such as the sea of the west, land of Prester John, and the mountains of the moon but not their provenance. There are two similar books he's written - on to the next! (I see FB has added a bunch more 'feelings' - I wish there was an 'intrigued' or 'educated'!) (Newsletter note: my little books reviews are posted on Facebook first.)

Ponderings...

I mentioned in the intro section above that I'm rebooting a couple of hobbies, including computer graphics. My goal there is to get back to the point I was at 25-odd years ago where I had code running on my old [Acorn Archimedes](#) (British computer) that could do a few things:

- Display a rotating wire-frame cube
- Display a rotating cube that had an image on each side
- Display a rotating torus, comprised of an arbitrary number of segments, each with an arbitrary number of faces, with a light-source so the color shade of each face varies in brightness depending on its angle towards the light source

I'd also ported the code to OpenVMS with some Alpha assembly language when I worked at DEC/Digital in the late 1990s.

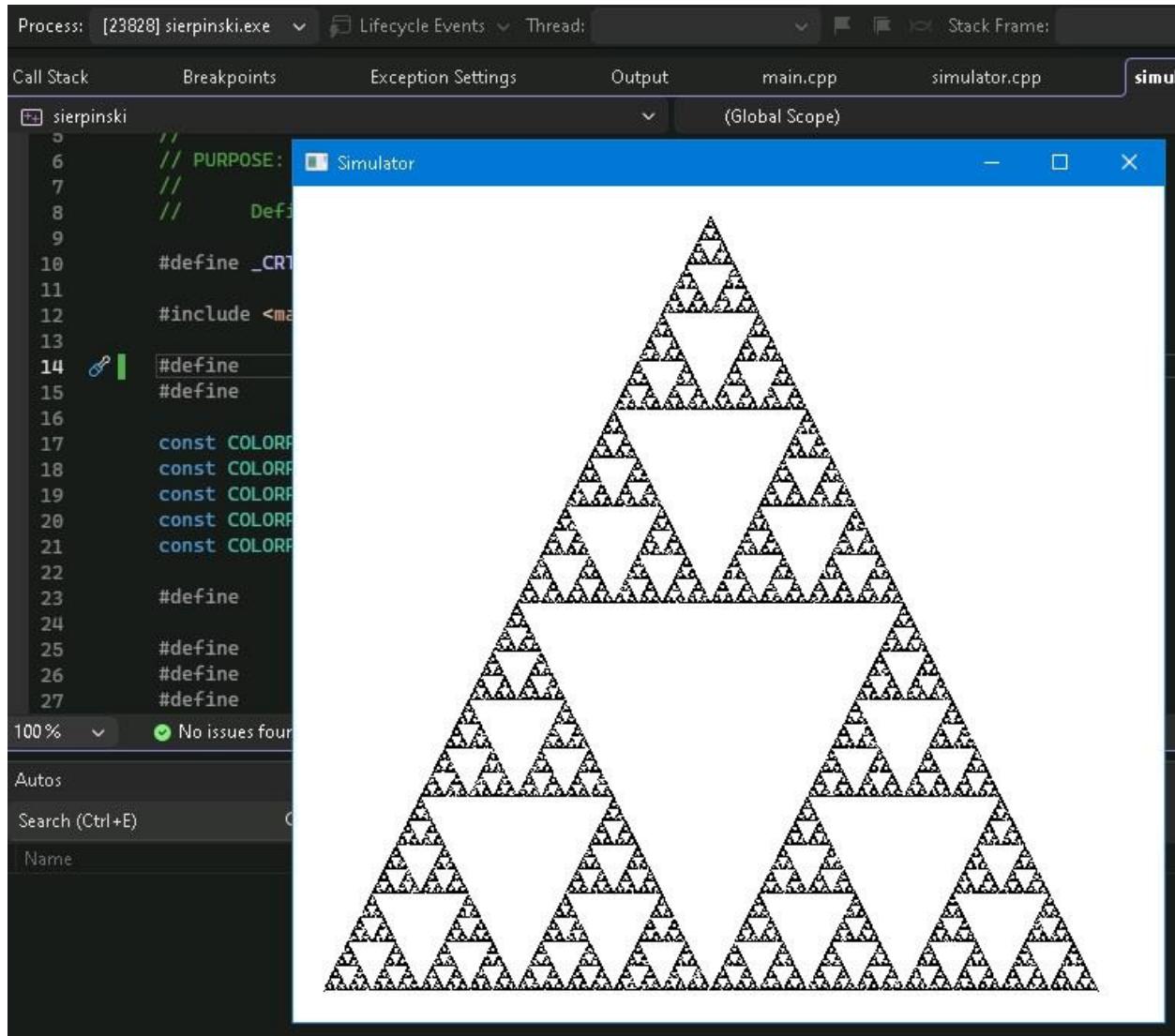
At first glance these seem daunting. However, they can be broken down into many small steps, which on their own aren't so daunting. For example, display a rotating wire-frame cube can be broken down into:

1. Draw a line in a window
2. Map 3-d points to 2-d points
3. Rotate 3-d points
4. Draw a 3-d cube in a window, then erase, rotate, and draw again
5. Implement double-buffering so there's no flickering

A bit less daunting, right? #2 and #3 are just matrix math. But #1 is a major hurdle. It can be further broken down (on a Windows machine using the basic GDI graphics library and C++ in VS 2026) as follows:

- Create a window and display it
- Implement a loop to process windows events (e.g. WM_PAINT)
- Figure out how to plot a pixel
- Figure out how to use colors
- Figure out how to use pens and brushes
- Draw a line in the window

Starting at the bottom like this teaches me how the fundamentals of display and graphics work on Windows, so I'll be more easily able to implement complex functionality as my projects progress. I worked through the first few steps and decided to take a tangent into fractals and wrote some code to display a [Sierpinski Gasket](#) (something I first did back in 1986):



Very pretty. But how is this related to SQL Server and the Insider newsletter?

Over the last ten years while I've been mentoring people, I've often been asked how to learn X or Y to help with career growth, often with the aside that the mentee finds it overwhelming to get started. "How do I learn Azure?" "Where do I start with database design?" "How many indexes should I have?" (Ok, I made up the last one – there's a funny story around that...)

My reply is always to take a step back and break down the goal into smaller goals, and then even smaller goals, that are manageable to think about and doable in a reasonable amount of time with a reasonable amount of effort.

The aim is to gradually work towards larger goals, while being able to tick off completed steps along the way, so your brain sees tangible progress without getting overwhelmed by immediately

trying to accomplish a major goal. This is how any good training course is structured – learn and try the building blocks – and the idea behind the old adage “walk before you can run”.

Call to Action: After doing your post-mortem of 2025 and starting to set yourself goals for 2026, don’t be put off from setting yourself a major goal. By breaking that goal down into baby steps, you can achieve anything!

The Curious Case of...

This section of the newsletter explains recent problems we’ve helped with on client systems or been asked about online; they might be something you’re experiencing too.

Well, here’s a blast from the past – 14 years ago to be exact! Someone emailed me over the weekend with a question about DBCC CHECKDB’s ESTIMATEONLY option and why it doesn’t read everything. It’s because of metadata – see my explanation [here](#)...

#TBT

(Turn Back Time...) Blog posts we’ve published since the previous newsletter plus some older resources we’ve referred to recently that you may find useful.

The theme for the #TBT section this time is replication, still a hugely relevant and useful technology. Here are some resources for you:

- Joe’s Pluralsight course on [SQL Server: Transactional Replication Fundamentals](#) that has 2 hours explaining what replication is, how to set it up, how to monitor and troubleshoot it, and how to combine it with other HA technologies
- Whitepaper on [SQL Server Replication: Providing High-Availability Using Database Mirroring](#) that I wrote for Microsoft back in 2008, but is still completely relevant today and can be extrapolated to working with Availability Groups too.
- Old whitepaper on [Proven SQL Server Architectures for High Availability and Disaster Recovery](#) that I wrote for Microsoft in 2010, and isn’t listed on their site any more, but has an interesting set of architectures, including one using peer-to-peer replication.
- And a bunch of blog posts:
 - [In defense of transactional replication as an HA technology](#)
 - [REPLICATION preventing log reuse but no replication configured](#)
 - [The Transactional Replication Multiplier Effect](#)
 - [When is the Publication Access List required?](#)
 - [Transactional Replication Use Cases](#)
- And check out the [ReplTalk blog](#) (via the WayBackMachine) that’s been a fount of replication knowledge since 2010 and sadly shut down in late 2025.

I hope you find these useful and interesting!

Video Demo

In this demo Jon shows the new JSON Binary Data Type in SQL Server 2025 along with some demonstrations of the performance and compression benefits of the binary JSON type over the legacy nvarchar(max) string type for JSON storage in SQL Server.

The video is just over 6 minutes long and you can get [here](#).

You can get the demo code [here](#).

Enjoy!

SQLskills Training

We have no plans for live, public classes in 2026, but we've already released the first of many new courses coming over the next year! And of course, all our recorded courses from the last few years are still as relevant as ever.

To help your manager understand the importance of focused, technical training, we've also added a few items to help you justify spending your training dollars with us:

- [Letter to your manager explaining why SQLskills training is worthwhile](#)
- [Community blog posts about our classes](#)

You can get all the details in our [shop](#).

Summary

I hope you've enjoyed this issue – I really enjoy putting these together. If there's anything else you're interested in, I'd love to hear from you - [drop me a line](#).

Thanks,

Paul

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