



AI Didn't Replace Me

It Changed What I'm Responsible For

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There's a growing narrative in engineering circles that AI is replacing roles like mine.

As an applications engineer, I work at the boundary between hardware, software, and customers. I build test systems, integrate instruments, automate workflows, and debug real equipment. Lately, people assume that because AI can write code, explain protocols, and generate documentation, my job must be disappearing.

It isn't.

What's happening is subtler, and more interesting.

AI is removing friction from engineering, not removing engineering.

AI Eliminates Tasks. Not Accountability.

AI can now draft Python scripts, summarize instrument manuals, generate SCPI commands, parse logs, and suggest architectures. That work is dramatically faster than it used to be.

But none of that is the job.

The job is delivering systems that work.

Customers don't buy code. They buy outcomes.

They buy reliable measurements, safe electrical designs, repeatable workflows, validated results, production readiness, and support when things fail.

If a \$200,000 test stand stops working, nobody opens ChatGPT.

They call a human.

Anyone Can Build an App. Reliable Systems Require Experience.

Today, almost anyone can use AI to create an application.

That's not the differentiator anymore.

A test stand isn't just software. It is hardware, timing, power, safety, data integrity, edge cases, operators, and failure modes all interacting at once. AI can help write code, but it does not own the consequences when a relay sticks, an instrument behaves differently than expected, or noise corrupts a measurement.

Those insights come from years of working with real systems.

I've spent my career building and debugging production test setups. That experience is what makes systems reliable. Now I integrate AI into that foundation.

The Role Didn't Disappear. It Moved Upstream.

AI accelerates development. It does not replace engineering judgment.

The goal is not just an application. It is a production-ready system that delivers trustworthy results.

AI made coding cheaper. It made engineering judgment more valuable.

Many people can build something that runs. Far fewer can build something that survives.

AI didn't replace me. It forced me to evolve.

The opportunity is not to replace engineering judgment, but to apply it at higher leverage.

**About the Author**

Eric Beaty is a founder and principal applications engineer with Dr. Volt Inc., focused on engineering software, test automation, instrument integration, and production-ready test systems. His work spans the boundary between hardware, software, and customer requirements, with an emphasis on building reliable systems.