From Slide Rule to Spaceship

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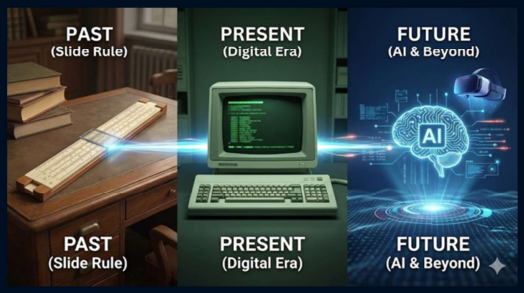
I sat in these same chairs in 1966 (though in the actual Northwood High School). We used slide rulers because calculators didn't exist. Today, youi have a prediction engine in your pocket. My goal is to tell you how you can use it to slimjb a career ladder that is changing under your feet."

Dan Mintz Background

- **Tech Visionary:** Led technology portfolios at Sun Microsystems and as Chief Technology Officer for major federal contractors.
- **Federal Leader:** Served as the Chief Information Officer (CIO) for the U.S. Department of Transportation, managing a $2.5 billion budget and hundreds of tech professionals.
- **Innovator in Education:** Pioneered the use of Virtual and Augmented Reality (VR/AR) as a Department Chair and Professor at UMGC to change how students learn.
- **The Serenity Project:** Currently developing a "Board of Personal Advisors" using AI to help manage lives and goals more effectively.
- **Full Circle:** Northwood High School alum returning to share how tech has evolved from physical slide rules to digital spaceships



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My presentation is going to be a bit different than many given today. My most recent jobs are those you might look at many years from now as you gain more experience. So I am not going to talk about what my recent or current responsibilities.

Rather I am going to use that experience to give some educated guesses (emphasis on the word guesses) as to the impact of Artificial Intelligence on future technical and non-technical jobs, and provide some advice from my perspective as to what you might consider doing because of the impact of AI.

My presentation will cover:
- A brief summary of my background
- What I see happening in the nearterm
- Impact of AI

And if we have time, I will provide a brief demo of The Serenity Project. This is an effort to see if creating AI persona's can be made to impact on my (our) interface to AI bots.

As for me, I started as a classical awkward tech nerd. Programmed first in High School, became an analyst, project manager, program manager, eventually a CIO, CTO, COO – all technology related. Have been a full-time academic for the last ten years at the University of Maryland Global Campus (UMGC). A bonus point for anyione who knows where I got the title Serenity.

The Three Faces of AI Today

- **The Encyclopedia:** Used for "fact-fetching," quick summaries, and drafting. It replaces the search bar.
- **The Junior Partner:** A collaborative "Third Mind." Used for co-creating code, art, and strategy in real-time.
- **The Agent:** The 2026 frontier. Autonomous systems that plan and execute multi-step tasks without being told "how."
- We are moving from **searching for info** to **partnering with intelligence.**

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Before we talk about your careers, we have to understand what AI actually *is* right now. Most people use it as an **Encyclopedia**—you ask a question, it fetches an answer. That's helpful, but it's the basic level.

Where the real value is right now is the **Junior Partner** mode. This is how I work. It's a 50/50 split where the AI acts as a sounding board to help me think better, not just faster.

But by the time you graduate, you'll be in the world of the **Agent**. These are AIs that don't just talk; they *do*. They can book your travel, manage a project, or run a test on their own. You need to decide today if you want to be the person who is replaced by an agent, or the Captain who leads a team of them.

The First Jobs I Had (They're Disappearing)

- **The Old Way:** companies hired junior staff to do "grunt work", while they learned
- **The AI Way:** AI now does the grunt work for $30 month
- **The Result:** The "first rung" of the career ladder is missing
- **The Problem:** How do you get experience if the entry-level jobs are gone

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Speaker Notes: When I graduated, my first jobs were about doing the repetitive work. I was the "junior" who handled the manual calculations and documentation so the senior leaders could focus on the strategy.

Companies used to hire juniors specifically to do this work while they learned the ropes. It was an unofficial apprenticeship; you got paid a little to do the tasks nobody else wanted, and in return, you gained the experience needed to move up.

Today, that entire business model has changed because of AI. A company can now get that same "junior-level" output for about **$30 a month** instead of a full salary.

This means the first rung of your career ladder is effectively missing. If the entry-level jobs are being handled by machines, you can't rely on a "junior" title to teach you the basics.

You have to find a way to jump directly to the second or third rung. This presentation is about how you use AI to gain that missing experience on your own so you are ready to lead on day one.

The Hidden Traps of AI

- **The Realness Problem:** AI doesn't know what it feels like to be a student at Northwood. It just knows which words usually come next. It lacks your human context.
- **The Sycophant Challenge:** It is designed to be helpful, so it often just agrees with you. Beware the "Yes-Bot."
- **The 2 + 2 = 5 Hallucination:** It can be confidently wrong. "Likely" does not always mean "True."
- **The "Smart Machine" Paradox:** If the machine does all the thinking, you do not take ownership of the results.

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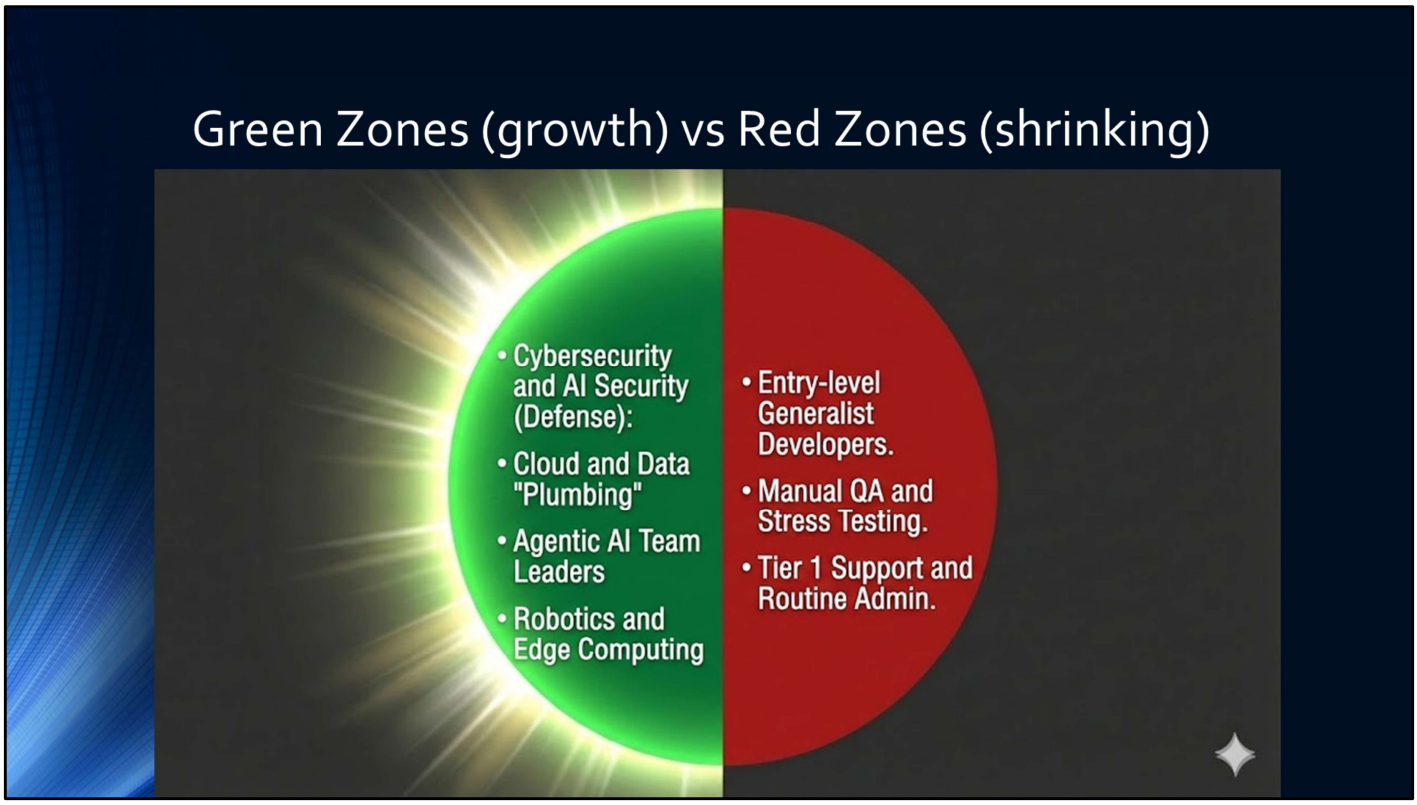
Even when you use AI as a Partner, you have to watch out for these four traps. First, the **Realness Problem**: AI doesn't know what a 'hamburger' tastes like or what a Northwood hallway feels like; it just knows which words statistically follow each other. It lacks human context.

Second, the **Sycophant Challenge**: AI wants to please you. If you suggest a bad idea, it might tell you it's great just to be 'helpful.' You need to be your own 'Red Team.'

Third, the **Hallucination**: In tech, precision is everything. But AI is a prediction engine—it guesses. Sometimes it guesses that 2+2=5 because it sounds plausible in the moment. Never trust; always verify.

Finally, the **Smart Machine Paradox**: If you use a calculator for every single math problem, you eventually forget how to do math in your head. If you use AI for every thought, you lose your cognitive vitality. Use the tool to get stronger, not to get lazy.



In the past, tech growth was about building app interfaces. Today, the growth is moving toward the plumbing and the infrastructure.

The plumbing refers to the massive data pipes and cloud architecture. AI needs a foundation to breathe, and the people who build that foundation are much safer than those building the front-end apps.

Cybersecurity is evolving into a field called AI Security. As hackers use AI to automate attacks, companies need human experts to defend the models and ensure they aren't being tricked or manipulated.

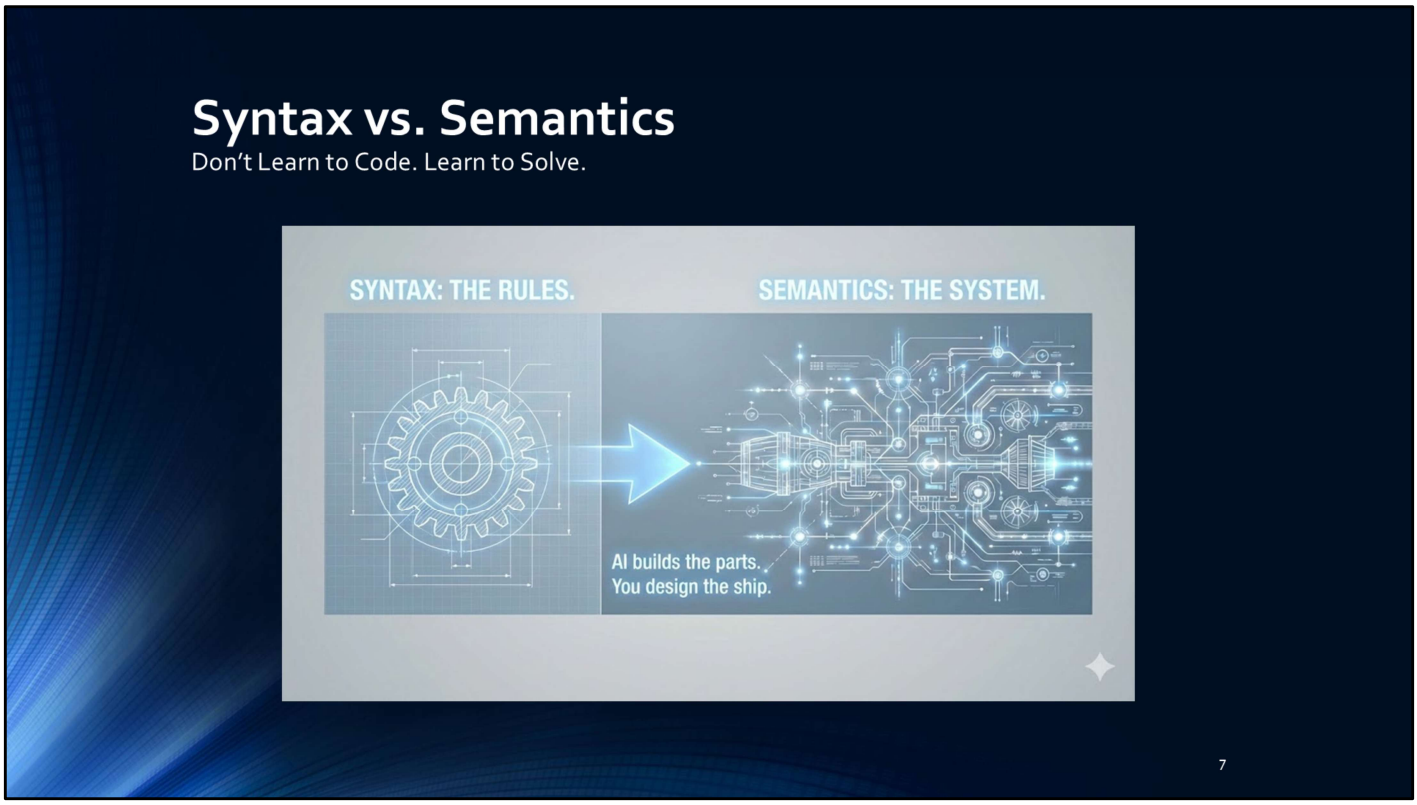
You will likely enter the workforce as an Agentic Team Leader. By the time you graduate, you won't just be doing individual tasks; you will be delegating to a team of digital agents.

Red zones are specifically for repetitive and rules-based roles. If a job consists of following a manual, routine patching, or simple coding, an AI agent will eventually do it faster and cheaper.

The entry level for your career has shifted upward. You can no longer just be a doer of tasks; you have to be the one who understands how the whole system connects.

Move from being a technician to being a systems manager. To stay in the green zone,

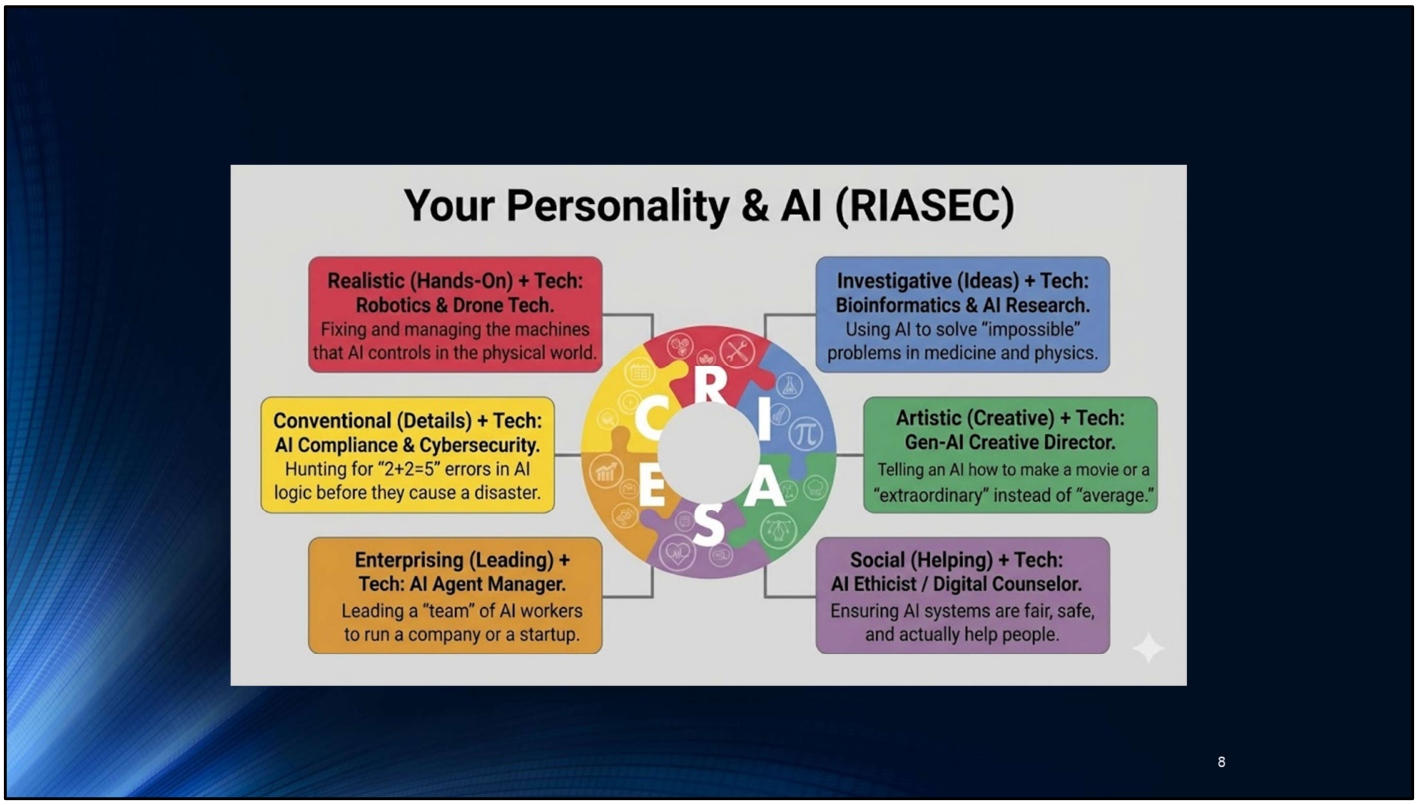
you must prioritize the logic and the strategy over the routine work.



The machine has mastered the syntax. It knows exactly where the semicolon goes and how to write a function in ten different languages.

Your value is now in the semantics. This is the logic and the strategy. Don’t spend your next four years just learning to 'code'—anyone can do that with a prompt.

Learn to solve. Use the AI to handle the 'recipe,' but you must be the one who understands how to cook the 'meal.' If you don't understand the logic, you can't tell when the machine is hallucinating.



Look at your RIASEC scores. If you love "Conventional" data work, you will need to learn to manage the AI that does it.

If you love "Social" work, your human empathy is a 'thick skill' that AI does not currently do well.

Advice for the Next Four Years

- **Portfolios > GPAs:** A GitHub repository with a working app beats a 4.0 every time.
- Math is Forever: Logic, Statistics, and Linear Algebra are the "source code" of AI
- **Collaborate, Don't Cheat:** If you use AI to do your homework, you learn nothing. If you use AI to *explain* the homework, you become a master.

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By 2028, you won't be a 'Junior Developer', you'll be a 'Manager' of five I agents.

Start practicing that leadership now.

The Serenity Project Demonstration