



Purpose Led, Data Driven

PHUSE EU Connect 2025

Code, Collaborate, Conquer:
The Future-Proof Programmer in an AI World

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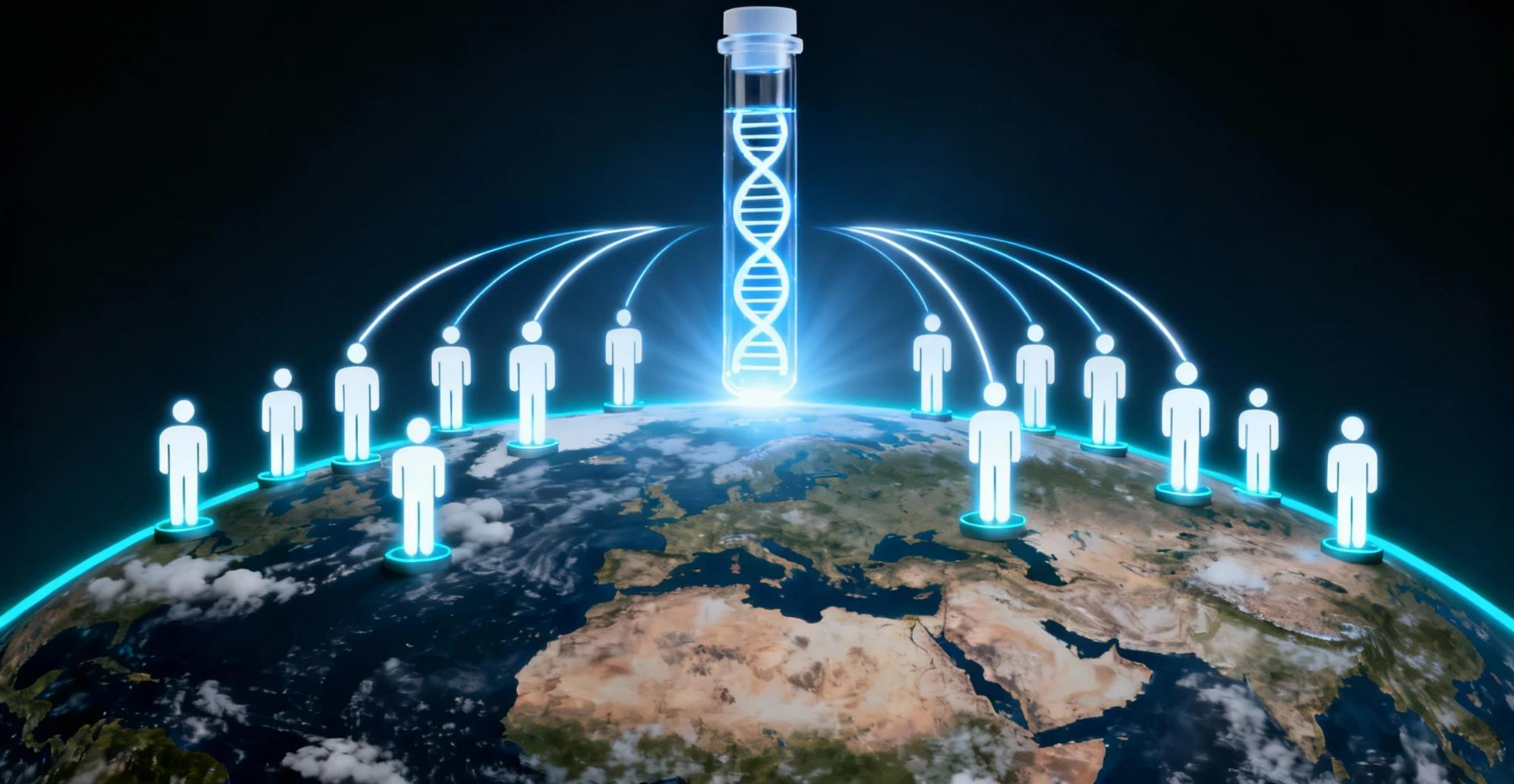




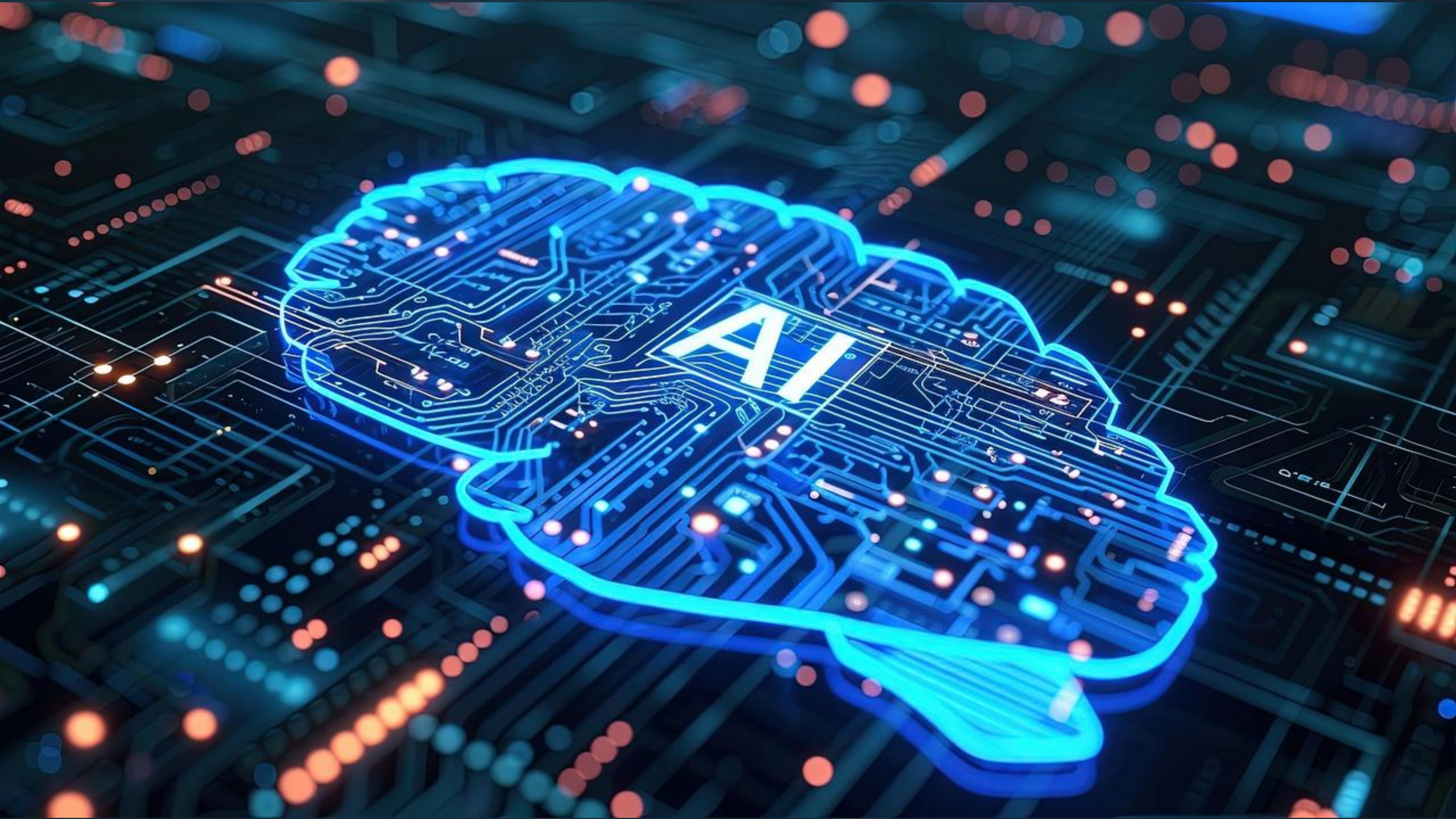


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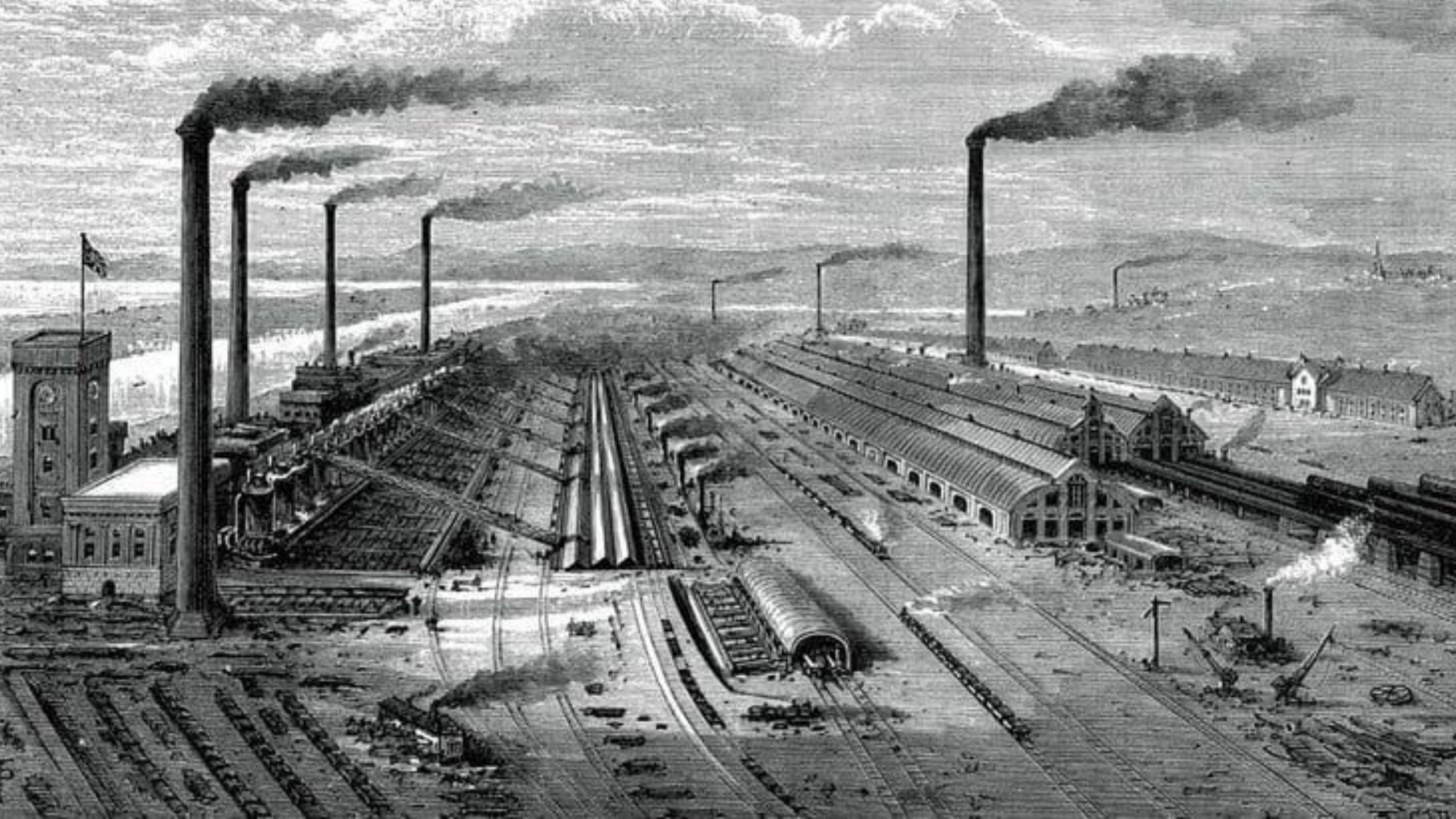




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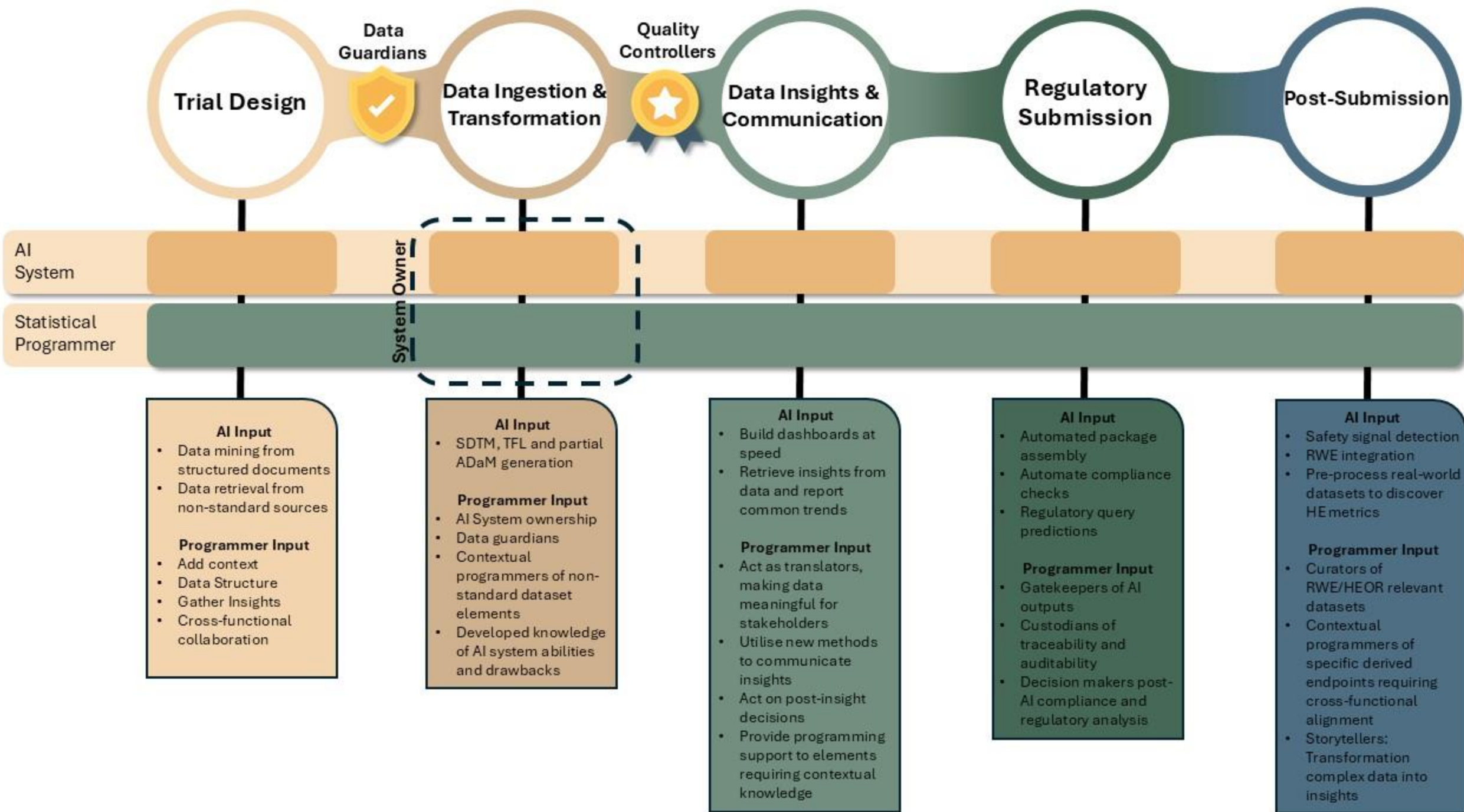


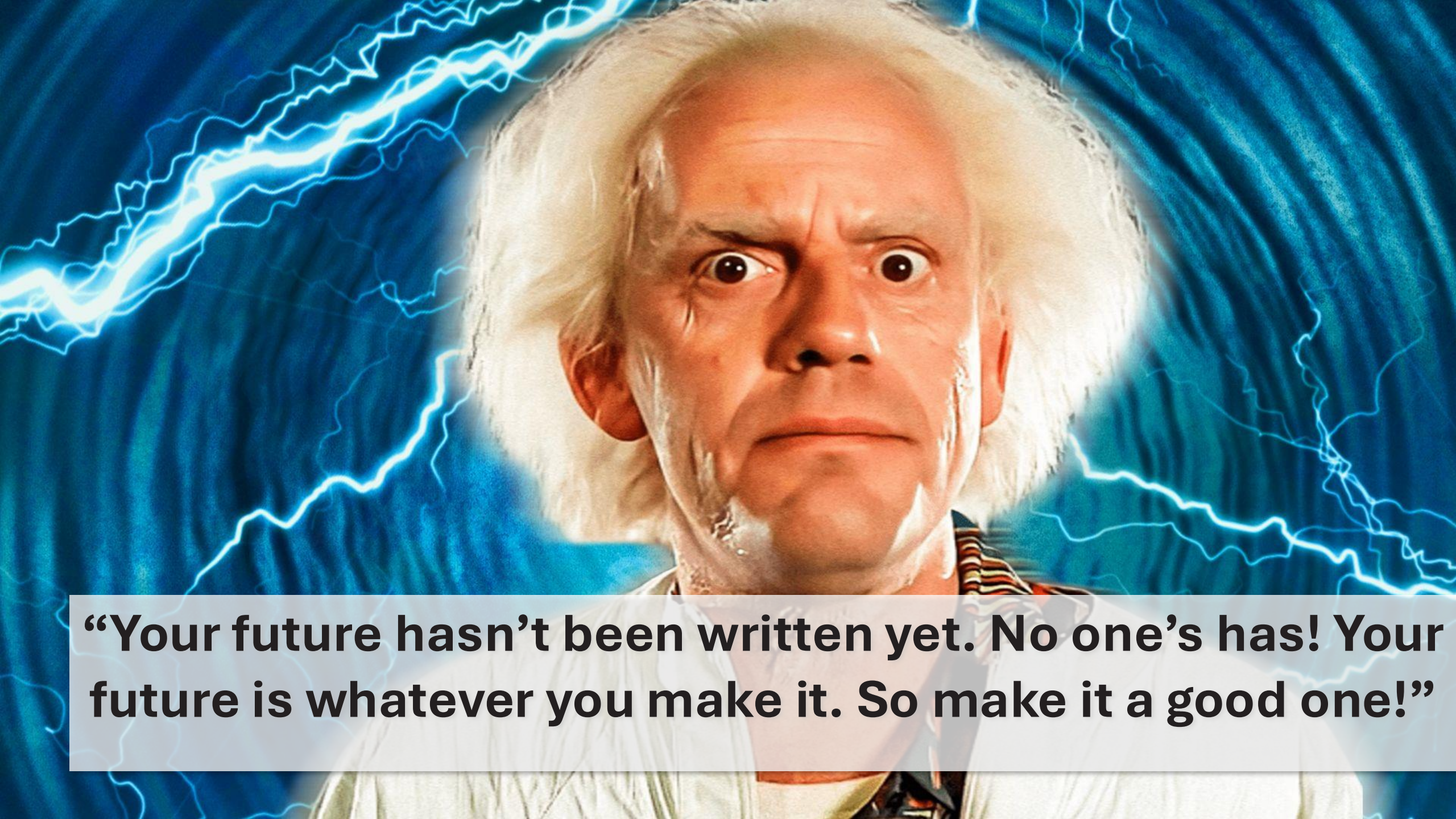












“Your future hasn’t been written yet. No one’s has! Your future is whatever you make it. So make it a good one!”



What does the Future-Proof Programmer Look Like?

1. Domain Expertise

- Deepen your knowledge of clinical trial design, endpoints and therapeutics areas
- Develop greater understanding of:
 - Science behind the trial
 - Regulatory context of data
 - Understanding of CDISC and ICH as frameworks that shape evidence, not just as formats

2. Critical Review

AI may be able to generate code, harmonise datasets, or suggest analyses at speed, but it cannot guarantee accuracy, appropriateness, or context.

Future-proof programmers will need to:

- Apply critical, logical thinking to review AI generated outputs.
- Identify nuances where automated logic may fail and provide necessary correction.
- Act as the safeguard for quality, transparency, and reproducibility. This oversight role is where the human-in-the-loop adds irreplaceable value.

3. Become a Storyteller

As drug development continues to demand faster decisions, programmers will increasingly act as “data translators”. This involves:

- Presenting data clearly to clinicians, statisticians, regulators, and other functional teams.
- Collaborating with statisticians to communicate not just what the numbers show, but what they *mean* in the wider context of trial objectives and patient outcomes.
- Partnering across regulatory, clinical, and commercial functions to ensure evidence is aligned from trial through to market access.

4. Embrace New Tools, be Curious

A future-proof programmer is unafraid of change and curious about new methods. Opportunities in most organisations already exist to strengthen skills in:

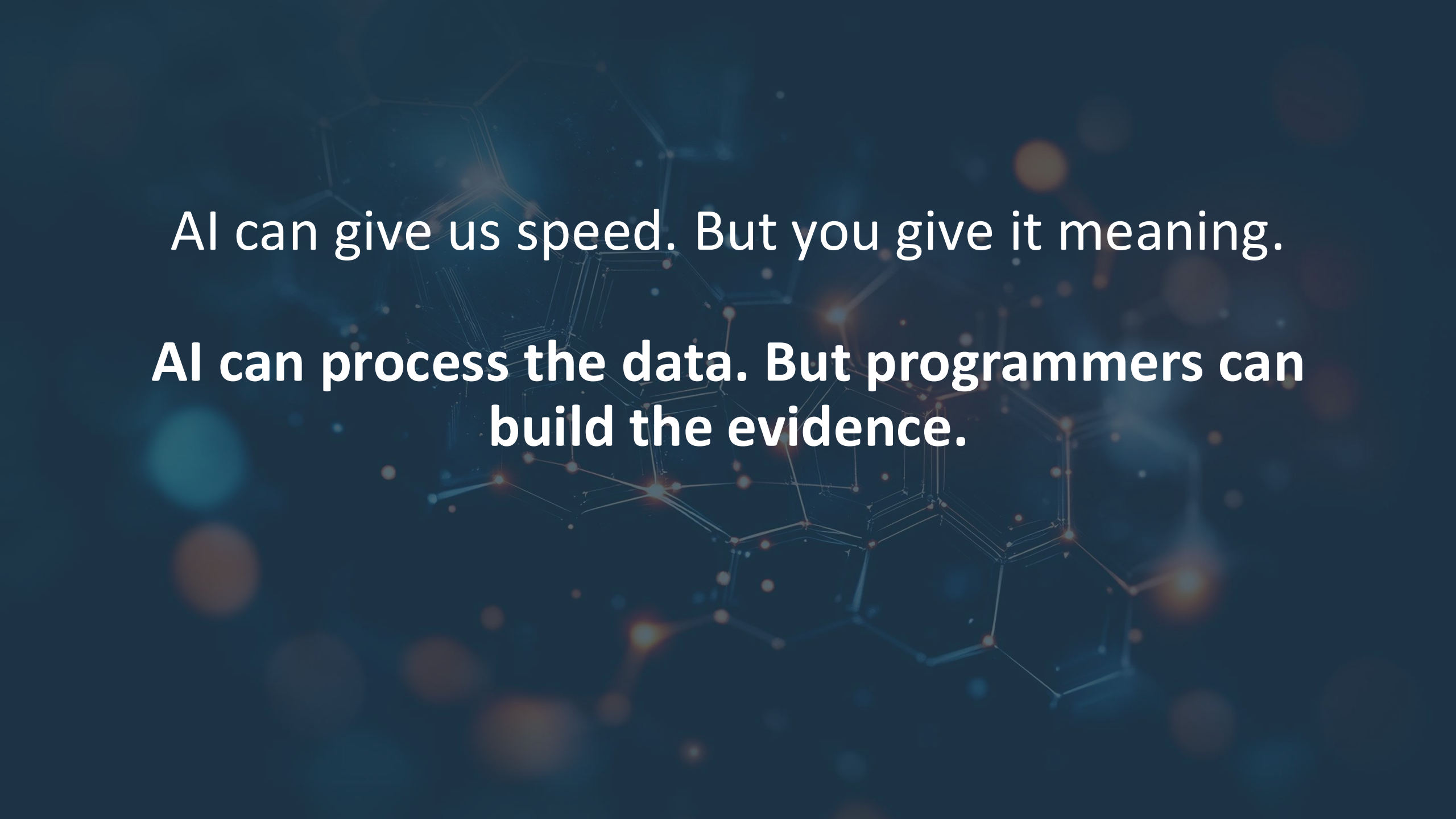
- Cloud computing and modern data pipelines.
- Data visualisation and interactive reporting tools.
- AI and machine learning, not necessarily as pure developers, but as informed users who can apply, evaluate, and challenge outputs.
- Statistical programmers have the opportunity to become AI system owners, becoming experts in the AI data transformation platform, just as they are today experts in SAS. This doesn't mean they know how to "build" the system, instead they will have a deep understanding of its internal mechanisms, abilities, drawbacks and ultimately be the guardians of the systems input, ensuring high quality output.

5. Championing a Critical and Logical Mindset

- Organisations of the future will recruit not just for programming ability, but for individuals who can think critically, solve problems logically, and adapt to new ways of working
- Seek out opportunities within their organisations that place them at decision making tables, in study design discussions, data strategy workshops, or cross functional analytics initiatives.
- As a programmer you already have a critical and logical mindset, future proof programmers will champion this and highlight its importance when integrating AI into workflows.

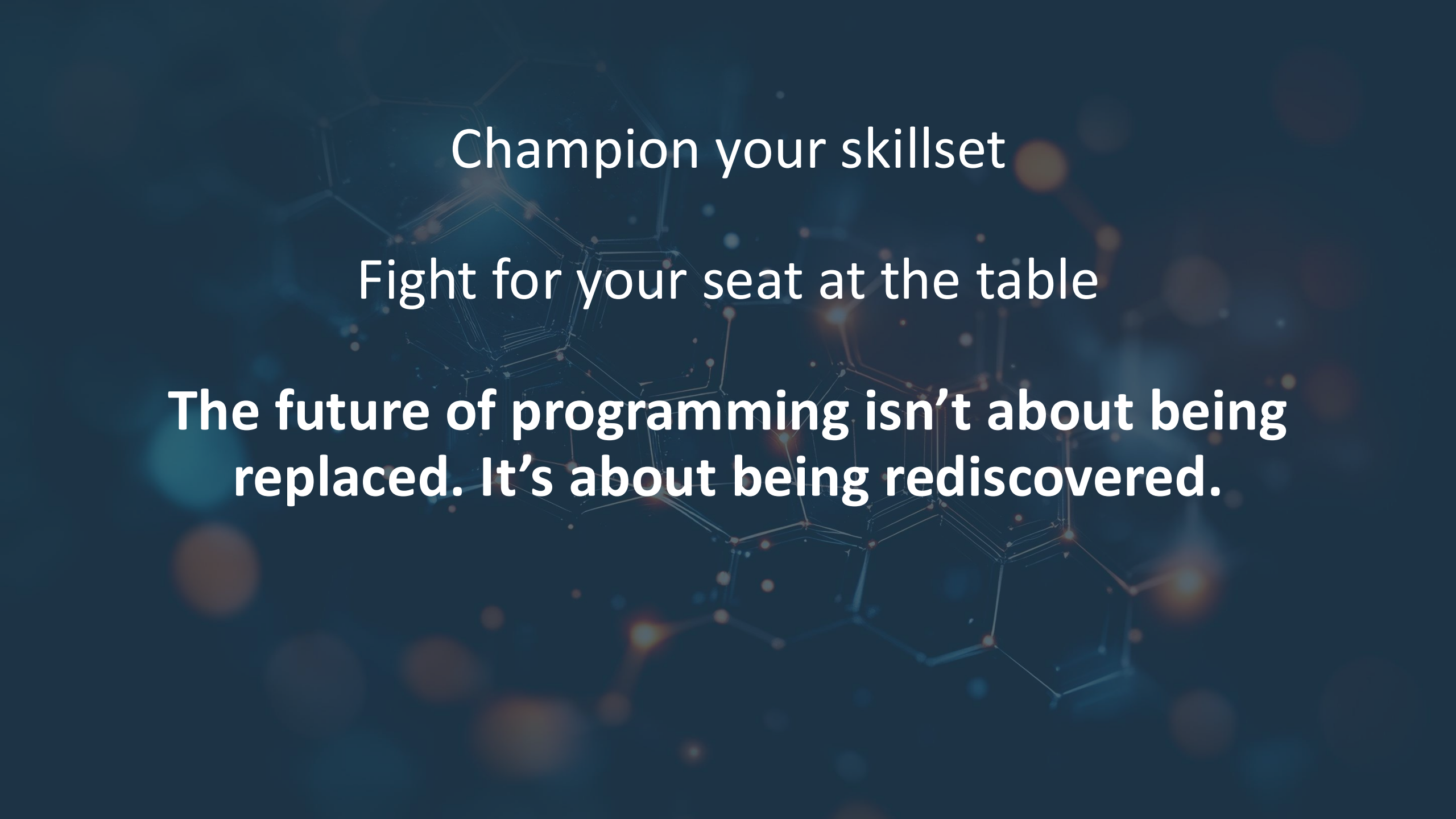
Challenges for the Next Generation

- How do ensure the next generation learn the same lessons we have, when the programming tasks we used as our training ground have been given to AI and automation.
- How do we ensure the knowledge we all have today (CDISC, ICH etc.) isn't lost as we age out.
- We need to ensure we foster a critical and logical mindset in the next generation, rather than allowing them to become glorified reviewers of AI generated outputs.



AI can give us speed. But you give it meaning.

**AI can process the data. But programmers can
build the evidence.**



Champion your skillset

Fight for your seat at the table

The future of programming isn't about being replaced. It's about being rediscovered.

Thank You

Any Questions?

Want to reach out?

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