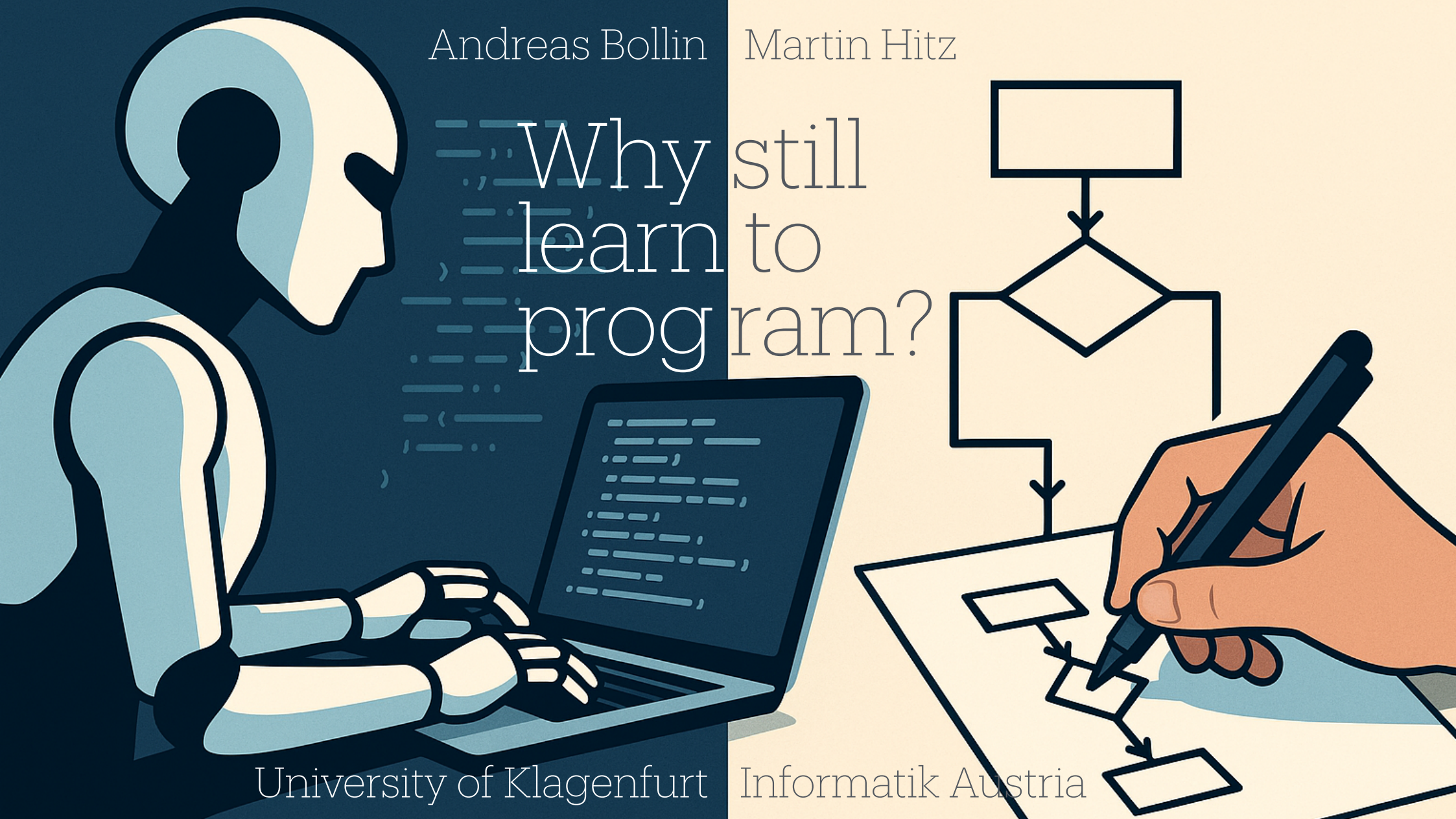
Andreas Bollin
Martin Hitz

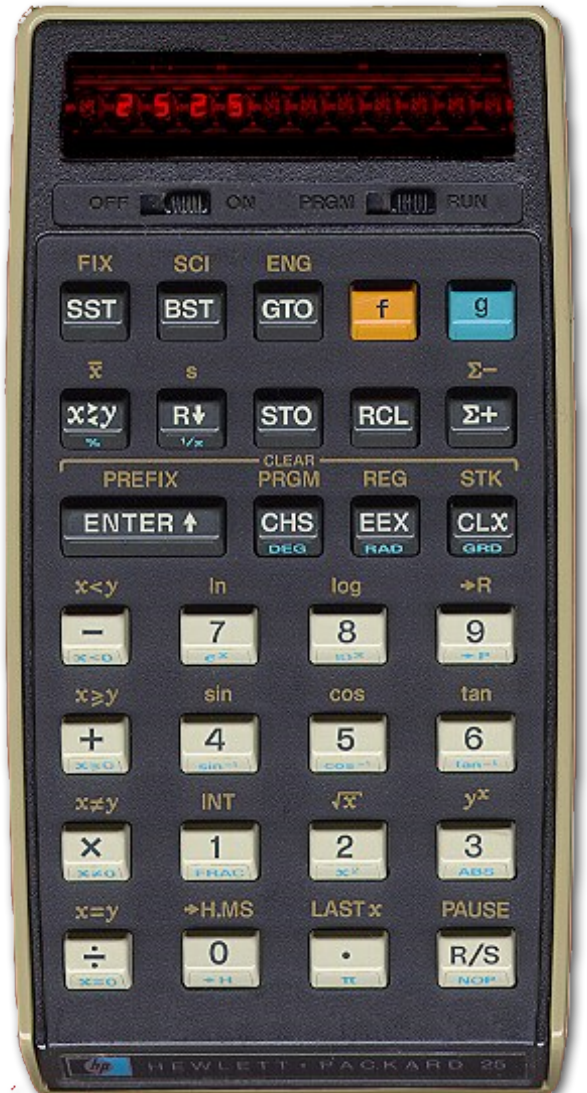
Why still learn to program?



University of Klagenfurt
Informatik Austria

The pocket calculator is excellent at calculating...

Why should I still learn how to do arithmetic?



AI excels at...

- ✓ Syntax and known patterns
- ✓ Reusing code efficiently
- ✓ Turning a well-defined task into code

But struggles with...

- ✗ Defining the problem
- ✗ Understanding context
- ✗ Making ethical / safe decisions
- ? Hallucinations

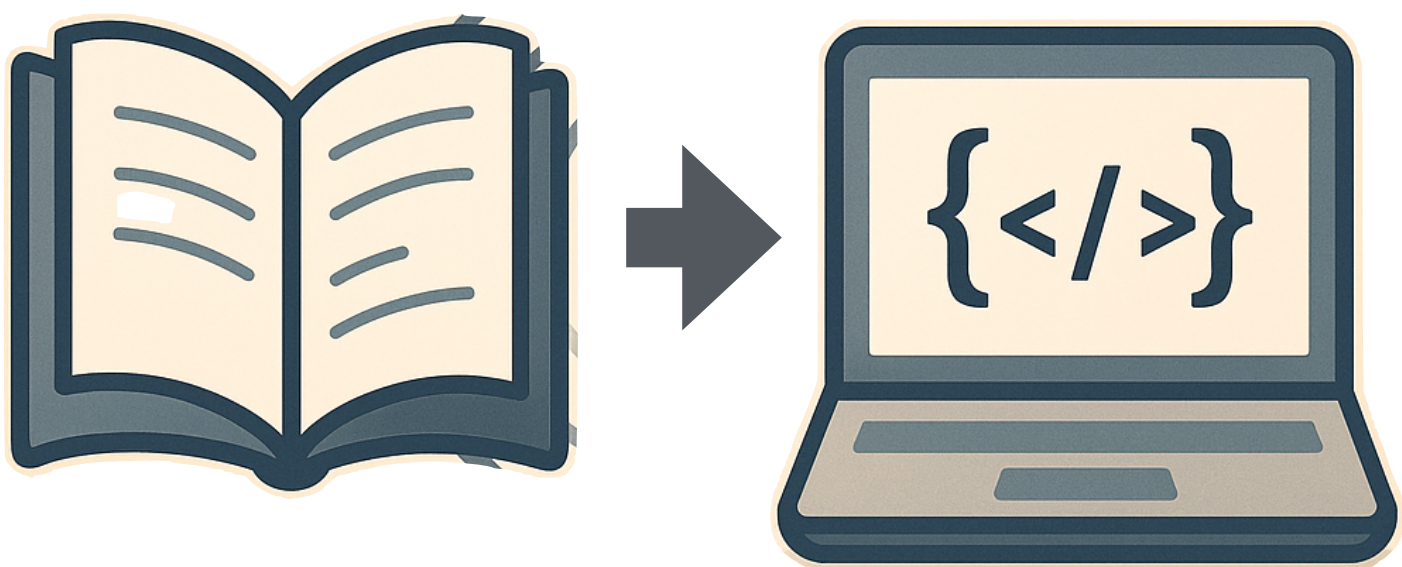
The cognitive skills behind programming

💡 Logical reasoning	🧩 Problem decomposition	🐞 Debugging mindset	🎨 Creativity through structure
Thinking step-by-step and making sound inferences.	Breaking big problems into smaller, solvable parts.	Finding and fixing errors through logic and patience.	Using precise rules as a framework for imagination and design.

The new literacy

- Understanding the digital world
- Speaking the language of AI
- Staying in control

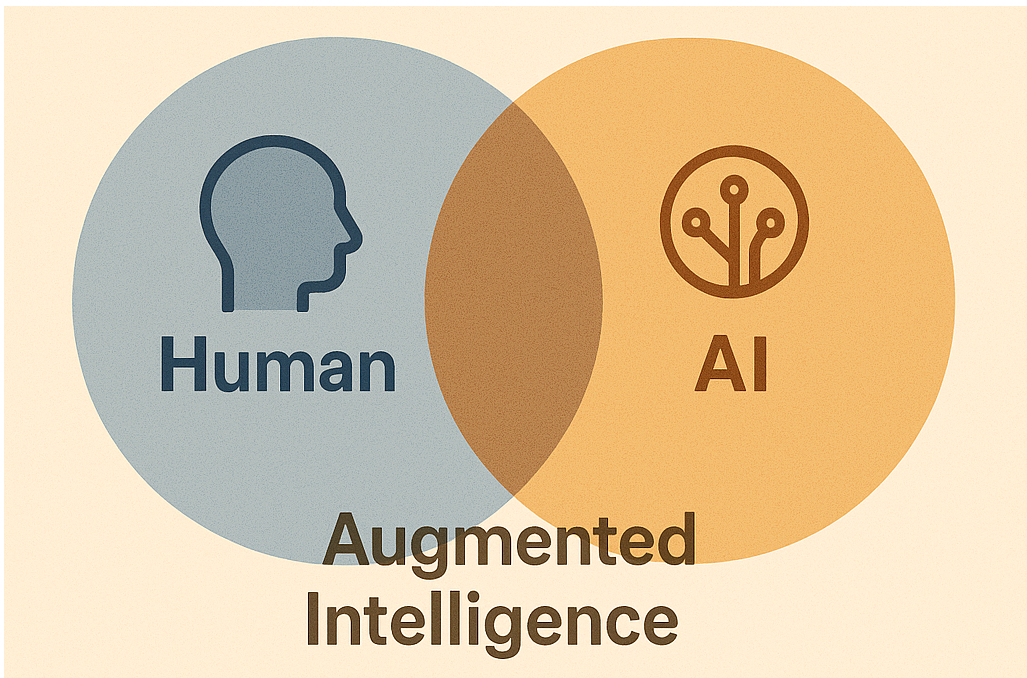
Programming literacy is digital self-defense and creative empowerment at the same time.



The human edge

The Future Skillset

- 🎨 Creativity
- 💬 Critical thinking & empathy
- ⚖️ Ethics
- 💻 Collaboration with AI



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