

Maintaining the Human Touch in Times of AI and LLMs: The Growing Importance of Critical Thinking Skills

Kyle Alexander Siemens – CEO and Owner Brightest GmbH
Julia Marques – Brightest Certification and Partner Manager

info@brightest.org | www.brightest.org



Thanks so much for having us!

Hello, I'm Kyle

- Originally from Winnipeg (Canada), living in Berlin (Germany) for nearly 2 decades
- I love Halloween... I've earned money scaring people
- My first job was a cook at the age of 14 in a truck stop on the number 1 highway.
- Bachelor's in Mathematics and German Literature
- Master's in Teaching German as a foreign language and (Master's Thesis topic), instilling critical thinking skills in students
- CEO and Owner of Brightest in the Certification/Education Industry
- Co-creator of the United Certification Portfolio
- In the authoring committee of the ISTQB CT-AI syllabus
- Promoting ethical GenAI and Prompt Engineering in the workplace

Hello, I'm Julia

- Originally from the South of Brazil, Porto Alegre, living in Germany for 8 years
- I love Carnaval, languages, and communication
- Bachelor in Psychology
- Specialization in language learning
- Master in Modern Languages
- PhD in Applied Linguistics, focus on how people learn
- Certification and Partner Manager at Brightest, in the EdTech industry
- Member of the ISTQB® Academia Working Group, which promotes scientific knowledge in software testing and brings more people into the conversation between academia, industry, and the testing community

Why this topic?

- AI is changing how we test, learn, and create
- The better AI gets, the more human skills matter
- Today: how to stay curious, critical, and in control

AI gives answers. Humans give meaning.

Curiosity and Humanity

Meet our Mascot

“Ask-a-lotl”
the Axolotl



#ReachYourPotential with  brightest

Xochimilco

Home of the Axolotl



#ReachYourPotential with



Imagine Exercise to get started



How do Humans Learn?

Through experience – trial, error, reflection

From other people – teaching, mentoring, collaboration

By observation – watching, listening, modeling behavior

Through structured learning – schools, books, courses

By making connections – linking new information to what we already know

Through curiosity and making mistakes – asking questions and exploring



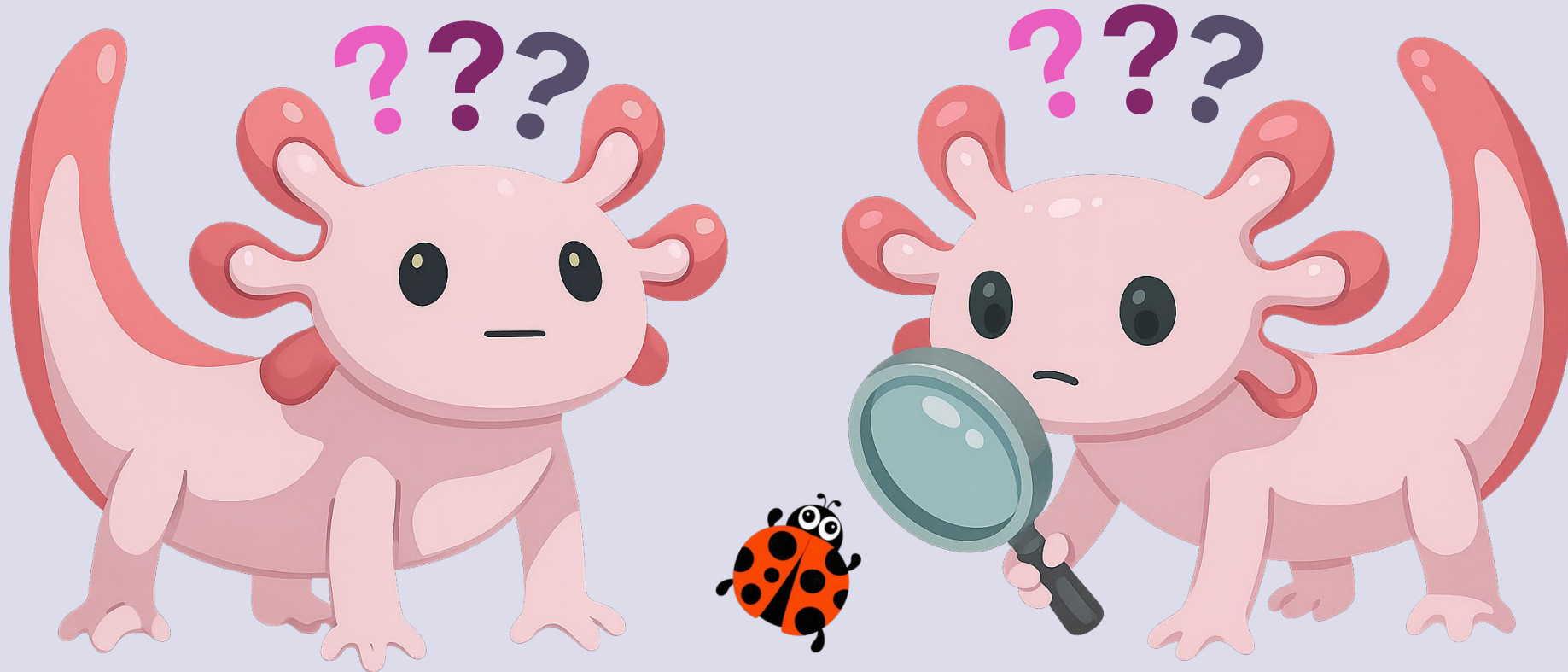
Imagine Exercise Continued



Why did we do this exercise?



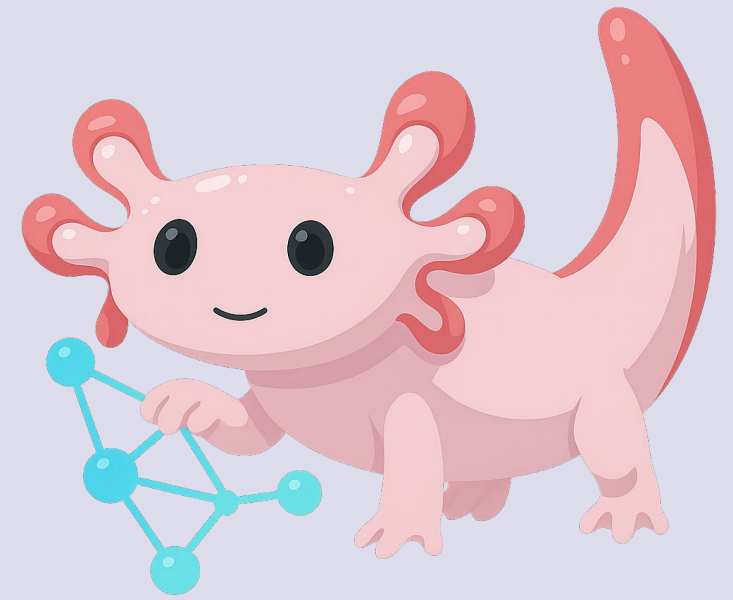
What is Critical Thinking?



The 3 Questions Rule

What can AI do?

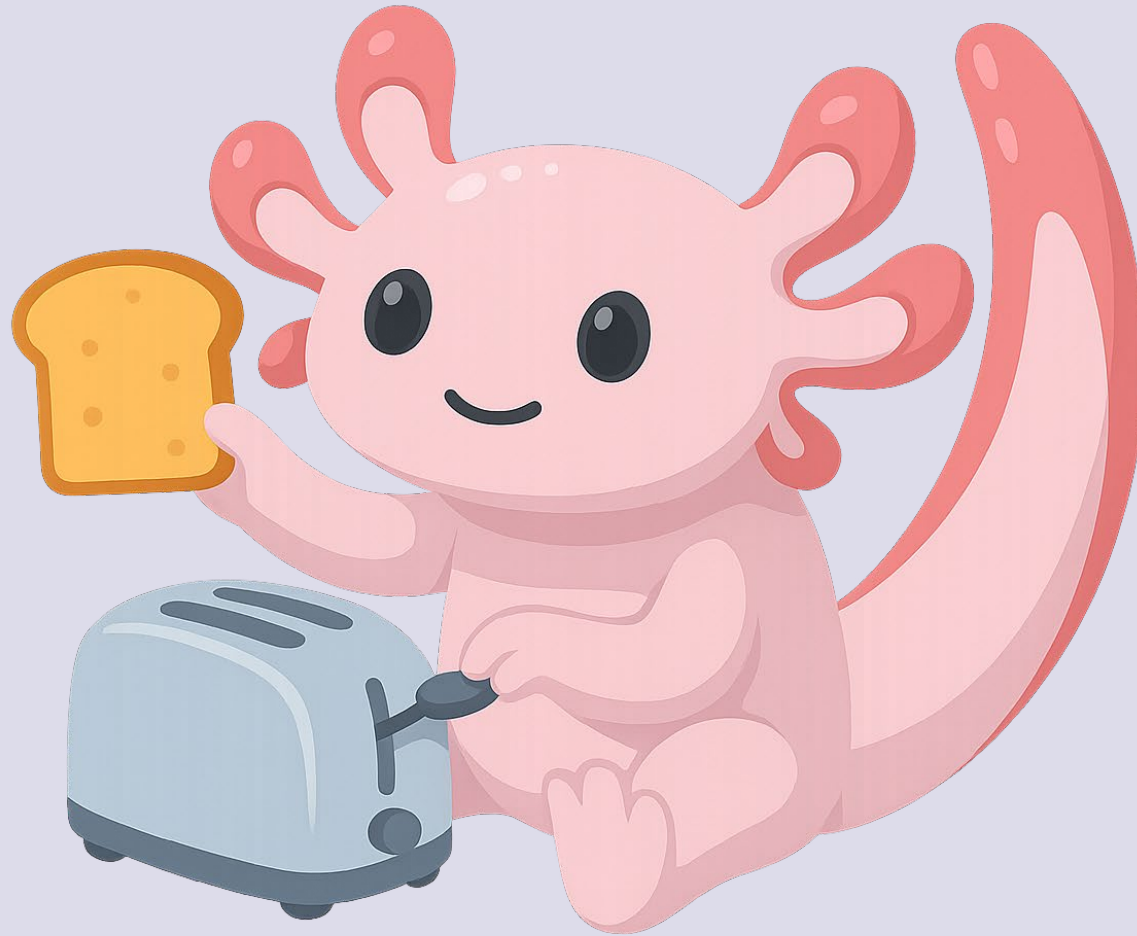
- AI can check if a feature works
- AI can pass exams, write poems, and even give relationship advice... with horrific precision
- AI can write test cases, fix bugs, and push code.



Imagine



Imagine



#ReachYourPotential with  brightest

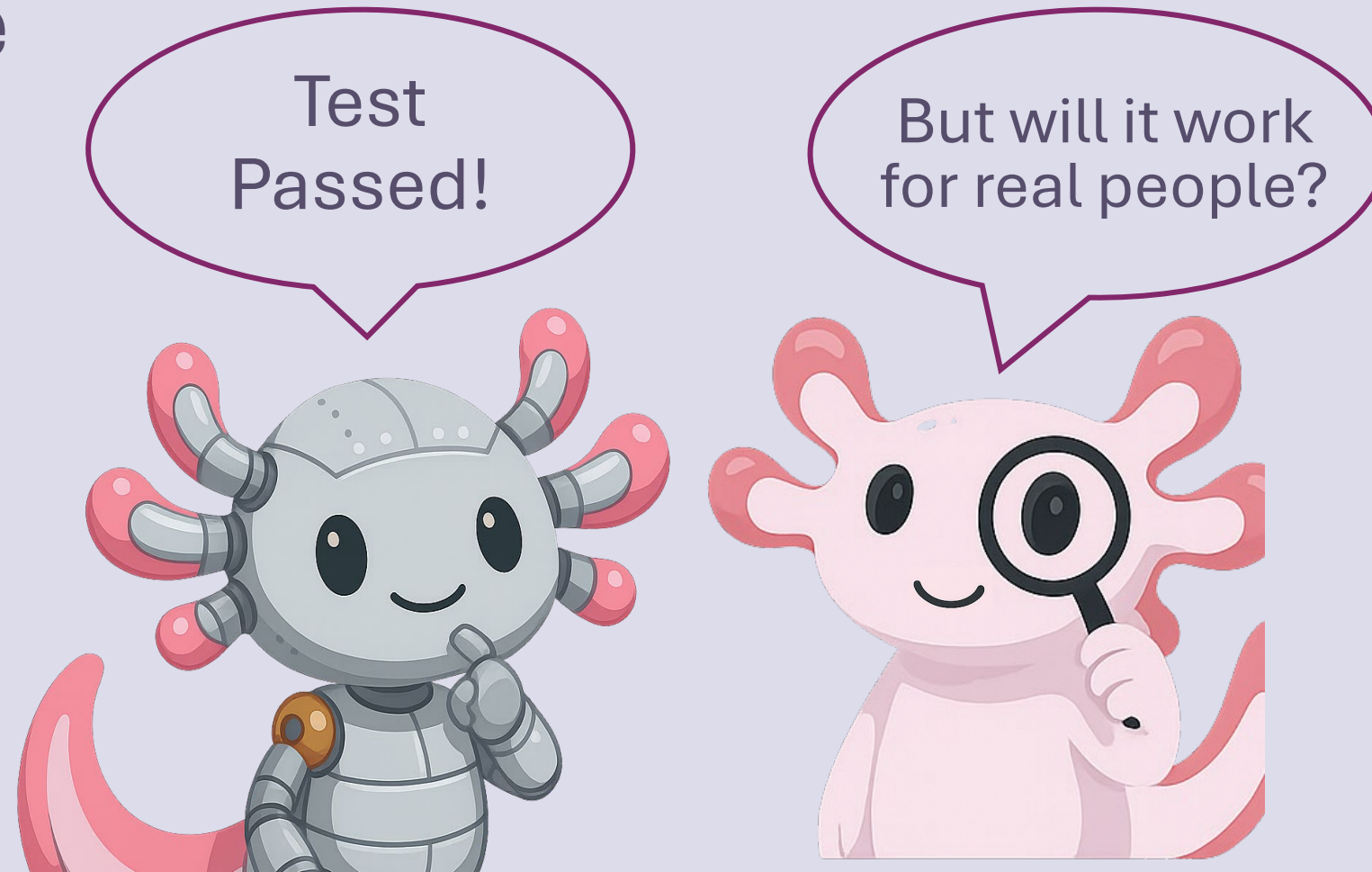
The Rise of AI and LLMs

If learning is how we grow as humans,
automation is how AI 'grows' → it learns patterns.

But it doesn't understand quality, it just detects
difference.



Imagine



Machines run checks, whereas humans add meaning

The Unique Value of Human Skills

Critical thinking and judgment

- Process data and identify patterns faster than any human vs. nuanced understanding of context, empathy, and complex reasoning

Creativity and innovation

- Generate new ideas vs. true creativity, which often comes from unexpected connections and abstract thinking

Empathy and emotional intelligence

- Calculated responses vs. the ability to understand, connect, and genuinely empathize with others.

Human in the Loop = Tester in the Loop

Humans provide context, judgment, and critical oversight to AI systems

- Examples:

- Software Testing: exploratory testing, UX validation, and ethical/bias testing
- Quality Assurance: root cause analysis and test strategy development
- Project Management: stakeholder communication, conflict resolution, and team motivation

Importance of cross-disciplinary collaboration (developers, testers, AI specialists, and business leaders)

Ethical Use and Trust

Bias and fairness checks

- Example: An AI model for resume screening might favor specific keywords that unintentionally disadvantage candidates from non-traditional backgrounds.

Transparency in AI outputs

- Example: A recommendation engine suggests a loan denial, but can't explain why.

Human accountability for final decisions

- Example: A chatbot flags a critical bug in production, but it still needs a human to confirm the impact and next steps before rolling back a release.

Skill Development in the Age of AI

Importance of Upskilling in areas that augment AI rather than competing with it

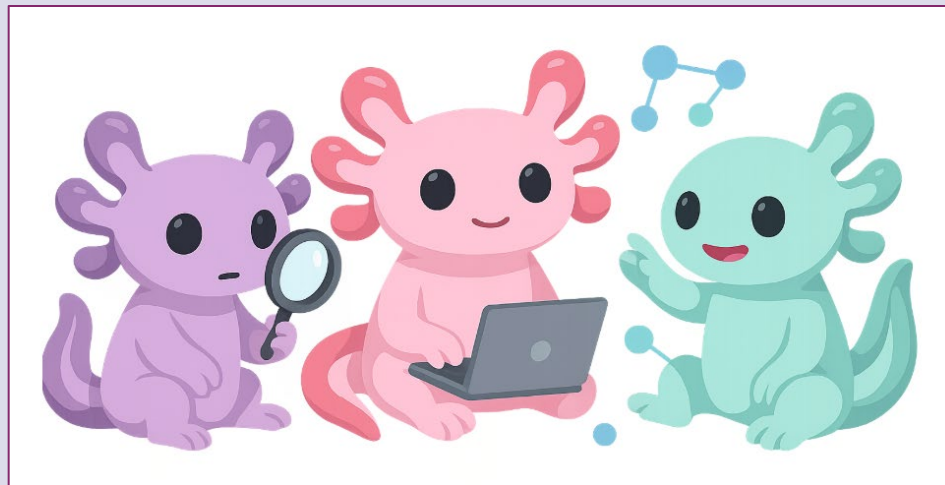
- data literacy, prompt engineering, and AI management

Continuous learning to remain relevant in a rapidly changing landscape



The Road Ahead

- What does ‘balanced collaboration’ look like in 2–5 years?
- New roles emerging at the human-AI interface
- Shape how AI is used, don’t just adapt to it



AI Quality
Analysts

Prompt
Architects

Ethical
Testing Leads

Remain Human, and know how you learn!

Consider the following for your situation:

- Do you learn best from experience or from the experience of others?
- Do you allow yourself to truly experience failure?
- How does your curiosity impact your learning?
- Have you ever imagined what it's like to be on the other side of given situation?

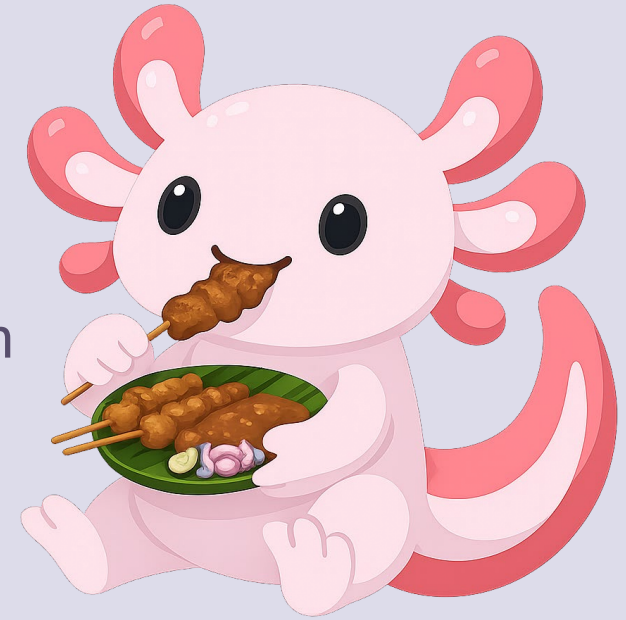
In testing, critical thinking is your API to AI.

“Tester/Human-in-the-loop AI improvement cycle”

DATA → AI → INSIGHTS → HUMAN JUDGMENT → IMPROVED DATA

Remaining Critical

- Remain adaptable
 - Embracing AI as a tool, not a threat
- Grab the reins of creativity
 - Utilize AI for idea generation and augment with your brain
- Be human and continue to question and evaluate
 - Use those QA skills, incl. rational judgement



AI isn't here to replace us, but rather to amplify our potential!

Human + Machine (could) \approx Better Quality

Stay curious

Keep asking better questions

Use AI to amplify what makes you...

UNIQUELY human



Thanks so much for joining us! 😊



Any Questions?

Kyle Alexander Siemens

kyle@brightest.org

Julia Marques

julia@brightest.org