Rethinking Education in the Age of AI: From Traditional Learning to AI-Powered Teaching

Exploring the transformation of traditional learning methods to AI-powered teaching approaches in the modern era.

The speaker

CTO at Omniviser

Assistant Professor at University of Warsaw

NVIDIA instructor

WHY?

Rethinking Education

How the Internet and AI Changed the WHY

- Before: Knowledge Acquisition
- Now: Critical Thinking and Synthesizing Knowledge
- Example: Law Students Focus on Ethical Reasoning rather than memorising the codexes

Transferable Skills for an AI-Driven Future

- Critical Thinking
- Problem-Solving
- Communication & Interpretation
- Adaptability & Lifelong Learning
- Ethical Reasoning
- Interdisciplinary Perspectives

Rethinking the Purpose of Studies

100%

From Memorization to Problem-Solving

100%

From Data Recall to Contextualizing Knowledge

100%

From learning the formulas to understand the system

The role of traditional studies

Traditional Role of Education

Disciplines like law, philosophy, and physics develop structured thinking.

Key Example: Physics

Teaches structured reasoning, problem-solving, and critical analysis.

The traditional role of education focused on developing disciplinary-specific skills, such as logical reasoning in physics and argumentation in law, which are increasingly important in the age of AI.

WHAT to Teach in the Age of AI

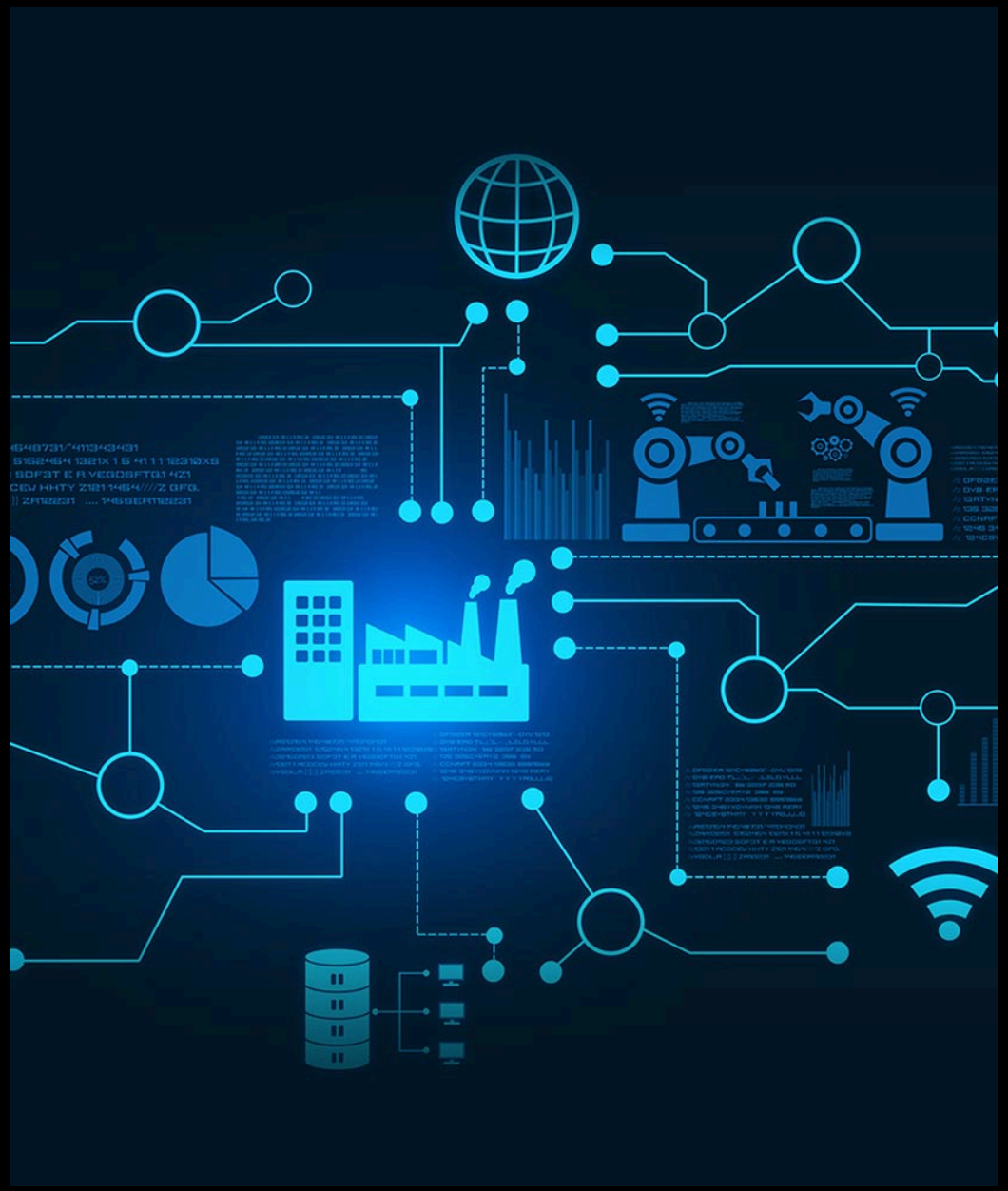
Critical Thinking

Creativity

Ethics

Interdisciplinary Skills

By focusing on these core competencies, education can equip students with the necessary skills to thrive in an AI-driven future, where critical thinking, creativity, ethics, and interdisciplinary collaboration will be paramount.



Make people think programmtically

Two Educational Paths in the Age of AI

Path 1: Non-Programmers (Humanities Focus)

Path 2: Programmers (Science & Engineering Focus)

Path 1 – For Non-Programmers (Humanities Focus)

1. AI Literacy
2. Ethical & Social Impacts
3. No-Code AI Tools
4. Interdisciplinary Collaboration

Path 2 – For Programmers (Science & Engineering Focus)

1. Math and computational Foundations
2. AI Model Training
3. Programming
4. Example Project

   Develops a predictive analytics model using financial data to forecast market trends and support investment decision-making.

Ethics as a Central Part of AI Education

Data Privacy

Algorithmic Bias

Accountability

Integrating ethical principles and considerations into AI education is crucial to developing responsible and trustworthy AI technologies that benefit society.

AI in Traditional Disciplines

Law

AI for contract analysis, predicting court case outcomes, and automating legal research.

Physics

AI simulations for complex physical phenomena, data analysis of experimental results, and predictive modeling.

Medicine

AI in medical diagnostics, drug discovery, and personalized treatment planning.

Finance

AI-powered portfolio optimization, fraud detection, and market trend prediction.

Humanities

AI-assisted text analysis, historical research, and cultural preservation.

HOW?

1. AI automation for students
2. Hand on experience
3. AI automation for educators
4. AI for reasearch

Personalization of Education Through AI

Adaptive Learning Platforms

Conversational Chatbots

Example: Duolingo

Personalized Feedback and Recommendations

Hands-On AI Experience and solopreneurship

Automation in Educational Processes

Automating Grading Tasks

Scheduling Optimization

Plagiarism Detection

By automating repetitive administrative tasks, AI can free up educators to focus on more important aspects of teaching and learning, ultimately enhancing the overall educational experience for both students and faculty.

Building AI-Integrated Learning Platforms

AI in Scientific Research

Future Vision for AI in Higher Education

65%

AI-Generated VR Simulations for Physics

30%

Predictive Analytics for Course Optimization

100%

Immersive Learning with AI + VR

45%

Personalized Learning Pathways

Conclusion and Q&A

WHY: Education now focuses on critical thinking

WHAT: Ethics, AI literacy, interdisciplinary knowledge

HOW: AI assistants for personalization and automation

By embracing the changing role of education and leveraging the power of AI, we can empower students to thrive in an AI-driven future. The key is to focus on developing transferable skills and critical understanding, while harnessing the benefits of AI-powered tools and personalization.