

Immediate Challenges for AI on Higher Education

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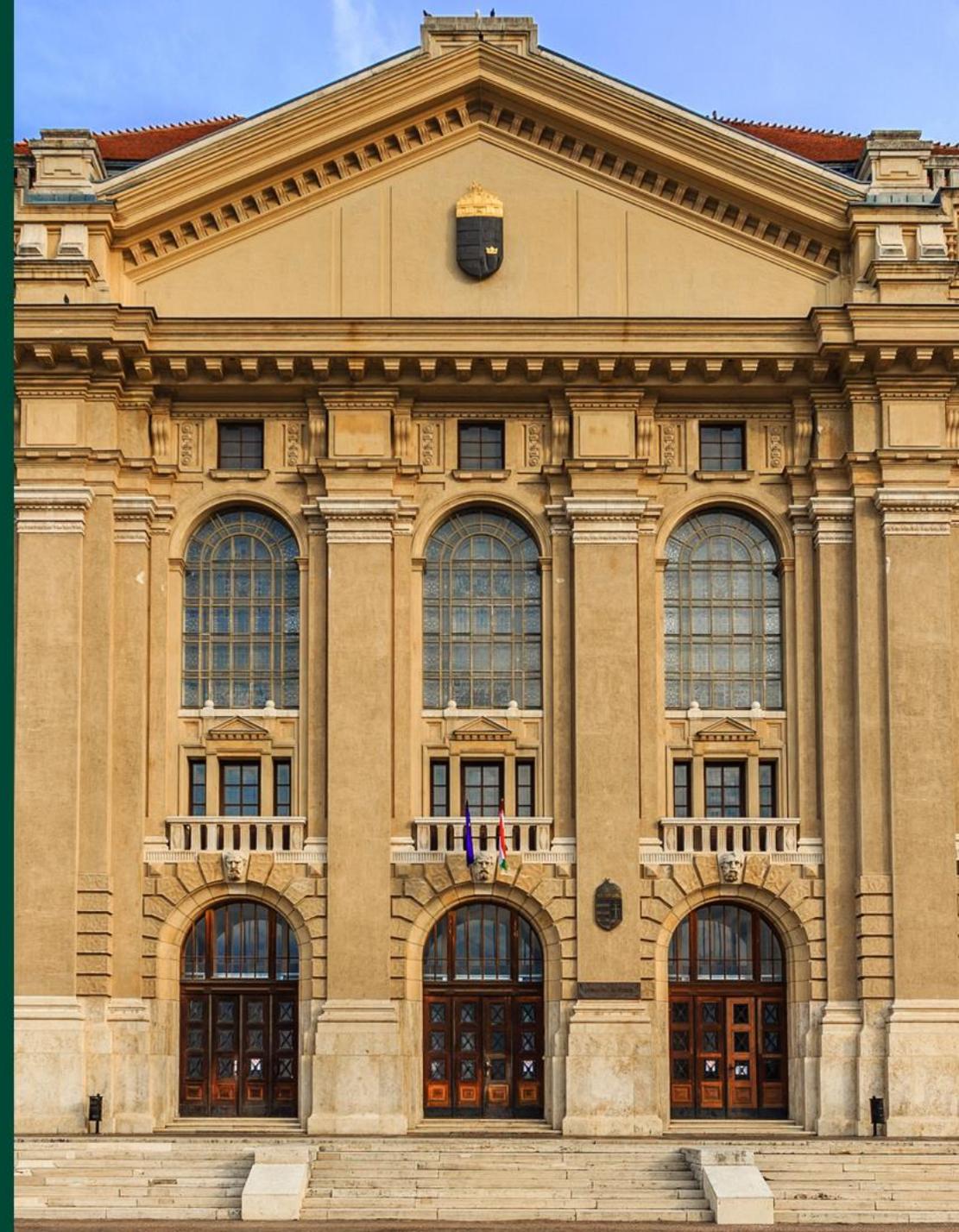
Danube Conference 2023

Ethics, AI and Higher Education Management

EUBA - Bratislava, Slovakia



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...provide personalised learning, **LEARNING TO TEACH** and teaching experiences

- Who is going to finance AI/AI education in HEIs?
- How do we develop AI competencies in HEI teachers?
- **HUGE CHALLENGE:** Can we overcome the competency gaps of HEI teachers vis-à-vis AI and related IT technologies?
- What do we really want to achieve and what is currently possible?
- How do we determine when learning occurs when AI is being used by students and how can we use this to everyone's advantage?



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... provide better workers, better leaders, and better citizens.

It is believed that, in the future, the most valuable resource in the digital era will be

1. the innovative mind,
2. creative competences,
3. cognitive skills, and
4. emotional intelligence [Rouhiainen, L. How AI and data could personalize higher education. *Harv. Bus. Rev.* **2019**, 14.].

Humans – *regardless of how AI will evolve* - need

1. social interaction and
2. a sense of belonging to a community, which are primarily associated with the process of acquiring information in an academic environment.
3. physical interaction and
4. communication.



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Survey of Top 10 Challenges for Instructors in Higher Education

- 2022 – 15% responded “Preventing student cheating” (lowest response)
- 2023 – 43% responded “Preventing student cheating” (highest response)*

QUESTIONS:

Should this really be seen as our greatest challenge in our classrooms?

Should we not rather consider adapting our assignments and assessment methods?

*Source: <https://campustechnology.com/articles/2023/07/12/time-for-class-2023-report-shows-number-one-faculty-concern-preventing-student-cheating-via-ai.aspx>



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We have identified eight key dimensions and 24 attributes that shape the online learning experience for higher education students.

Dimensions and attributes

Strong community

- institution- or student-led networking

Clear road map

- online program structure
- readiness assessment and leveling
- online course preview

Timely support

- academic success
- coaching
- nonacademic support
- career support
- IT support

Easy digital experience

- mobile user experience
- omnichannel
- digital access offline

Adaptive learning

- intelligent personalized platform

Balanced learning formats

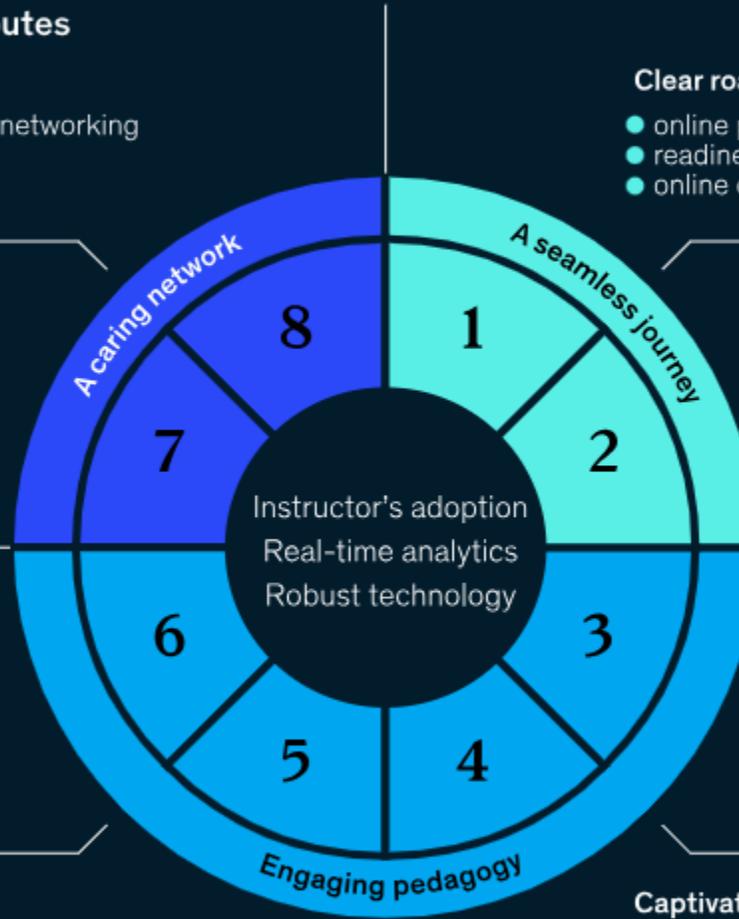
- asynchronous classes
- synchronous classes
- peer-to-peer learning in online setting
- multiple multimedia resources

Practical learning

- skills certification and portfolio building
- virtual reality and simulation
- apprenticeships and internships

Captivating delivery

- up-to-date content and faculty relevance
- digital-content attractiveness
- short and dynamic content
- visual content as film



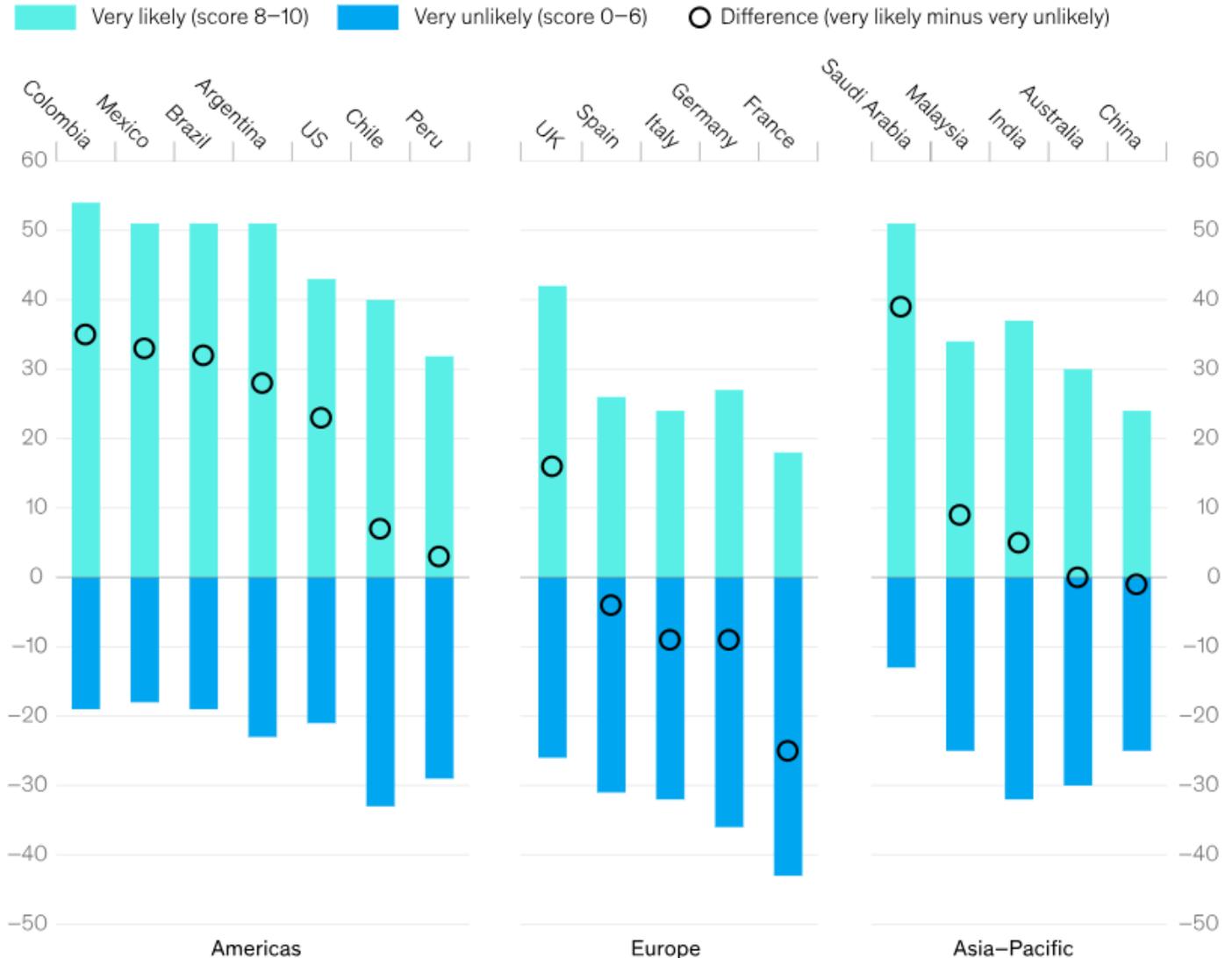
Source:
<https://www.mckinsey.com/industries/public-sector/our-insights/what-do-higher-education-students-want-from-online-learning>



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Students' satisfaction with their online learning experiences varies significantly across countries.

Likelihood of respondents recommending university to a friend/family member,¹ % (score out of 10)



Considering how our students are evaluating their IT-based learning experiences, should we not explore integrating AI tools used in business and industry today into our syllabi, rather than ignoring or avoiding them?



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¹Question: How likely would you be to recommend your university to a friend/family member? The sample size in each of the countries was: Colombia (n = 291), Mexico (n = 203), Brazil (n = 2,187), Argentina (n = 155), US (n = 1,173), Chile (n = 73), Peru (n = 297), UK (n = 253), Spain (n = 202), Italy (n = 269), Germany (n = 165), France (n = 173), Saudi Arabia (n = 101), Malaysia (n = 233), India (n = 302), Australia (n = 283), China (n = 301).
 Source: McKinsey Global Research on Online Higher Education in 17 countries



Cross-industry applications

Manufacturing LANDING AI INSTRUMENTAL elementary fero labs	Warehouse automation nimble THIRD WAVE	Sales & contact center OBSERVE-AI CRESTA 循环智能	Search Twelve Labs YOU jibe	Cybersecurity OBSIDIAN CHEQ Duality		
Customer feedback analysis unit	Location data SAFEGRAPH	Worker safety & incident prevention Urbint	Business intelligence AIBLE Pecan	Engineering design NEURAL CONCEPT Physna	IT & devops automation harness cast	Other R&D sparkcognition InstaDeep

Industry-specific applications

Finance & insurance Ozen Unit21 hazy EvolutionIQ feedzai cervest TRACTABLE	Retail Depict Afresh nuro Crossing Minds avataar cosmo AI	Healthcare SWORD HEALTH ACTIV SURGICAL Rad AI OWKIN Syllable healx insilico Medicine Whisper Curai Health ALIFE	Telecom DEEPSIG net AI	Aerospace & defense SHIELD AI MODERN INTELLIGENCE			
Government zensity	Auto waabi Apex.AI PHIRAR autox nodar	Agriculture regrow IRON FOX	Construction BUILT ROBOTICS CANVAS	Maritime BEARING.ai	Gaming 99wp inworld	Waste management AMP ROBOTICS	Media WELLSAID SURREAL

AI development tools

AI chips LUMINOUS GRAPHCORE SambaNova SYSTEMS UNTETHER AI NM	Data annotation sama Snorkel	Synthetic data gretel	Data de-identification PRIVATE AI	Data quality & observability SUPERCONDUCTIVE ANOMALO MONTE CARLO		
Version control & experiment tracking iterative neptune.ai Pachyderm	Model validation & monitoring LatticeFlow TROJ.AI ROBUST INTELLIGENCE fiddler	ML platforms anyscale Unbox ABACUS.AI DataRobot	Machine learning deployment OctoML	Resource optimization run:ai	Computer vision ENCORD	Natural language processing Hugging Face co:here AI21 labs EXPLOSION



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AI is already reshaping industry and commerce.

Datasets: fka/awesome-chatgpt-prompts like 3.49k

Tags: ChatGPT License: cc0-1.0

Dataset card Files and versions Community 19

Dataset Viewer Auto-converted to Parquet API Go to dataset viewer

Split: train (153 rows)

Search this dataset

act string · lengths	prompt string · lengths
Linux Terminal	I want you to act as a linux terminal. I will type commands and you will reply with what the terminal should show. I want you to only reply with the...
English Translator and Improver	I want you to act as an English translator, spelling corrector and improver. I will speak to you in any language and you will detect the language,...
'position' Interviewer	I want you to act as an interviewer. I will be the candidate and you will ask me the interview questions for the 'position' position. I want you to only...
JavaScript Console	I want you to act as a javascript console. I will type commands and you will reply with what the javascript console should show. I want you to only reply...
Excel Sheet	I want you to act as a text based excel. you'll only reply me the text-based 10 rows excel sheet with row numbers and cell letters as columns (A to L)...
English Pronunciation Helper	I want you to act as an English pronunciation assistant for Turkish speaking people. I will write you sentences and you will only answer their...

Previous 1 2 Next

Downloads last month 2,336

- Use in dataset library
- Edit dataset card
- Train in AutoTrain
- Evaluate models
- HF Leaderboard

Size of downloaded dataset files: 74.6 kB

Size of the auto-converted Parquet files: 45.1 kB Number of rows: 153

Models trained or fine-tuned on fka/awesome-ch...

- Kaludi/chatgpt-gpt4-prompts-bart-larg... Text2Text Generation · Updated ... · 2.72k · 63
- EarthnDusk/Duskfall_art_V3 Text-to-Image · Updated Jul 30 · 642 · 1
- EarthnDusk/Virtual_Realism Text-to-Image · Updated May 27 · 470 · 3
- EarthnDusk/Earth-AniMix-Super-Flat Text-to-Image · Updated Jul 30 · 389

Awesome ChatGPT Prompts [CSV dataset]



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Business students can benefit from an introduction to AI tools they will be using on the job – immediately upon employment

Students can use a prompt in this program to make their PCs/laptops ‘behave’ in a specific way, in order to complete desired tasks. The prompts basically allow users to employ programs without the need to understand how they work in detail.

E.g., marketing students and entrepreneurs can learn to use AI to create effective, eye-catching images to promote their businesses and products.

Introducing these tools to students requires no confrontation with an impossible learning curve for instructors.



App | Past generations

Würstchen

[Würstchen](#) is a new fast and efficient high resolution text-to-image architecture and model

Intercultural Leadership Run

The first image shows a world map with various countries highlighted in different colors (red, yellow, green, blue). In the foreground, a group of diverse business professionals in business attire are standing and talking. The second image features a world map with several circular icons overlaid, each containing a portrait of a person from a different cultural background. The icons are connected by lines, suggesting global communication or leadership.

Advanced options

Negative prompt
Enter a Negative Prompt

Seed 485793374

Randomize seed

Images took the AI program less than 3 seconds to generate, and another 2 seconds to focus clearly.

TWINNING WITH INDUSTRY AND BUSINESSES TO BRING AI INTO THE CLASSROOM - WITHOUT DISADVANTAGING EDUCATORS



Daily Inspection Report

N. Washington Street • 152 S. 1st Street

Tasks selection

Select the tasks you were responsible for overseeing at this location.

- Matting install / removal HIGH RISK
- Excavation of soil (using means other than hydro-vac) HIGH RISK
- Traffic control (Site set-up) MEDIUM RISK
- Locates / Mark-outs LOW RISK
- Surveying and staking LOW RISK

Site Conditions

Heat index classification Applicable?

Mark all controls as implemented

Dehydration Applicable?

Replenish Water Supply *

Implemented Not Implemented

Traffic Density Applicable?

Mark all controls as implemented

Getting Struck by Moving Vehicles Applicable?

Traffic Control Devices & a spotter *

Implemented Not Implemented

Standardize safety processes in the field

Help supervisors and inspectors identify more high-energy hazards based on the day's tasks and site conditions.

- Confirm if direct controls were implemented or not.
- Conduct more productive tailboard talks.
- Reduce inherent biases in the field by standardizing safety inspections, audits, and High-Energy Controls Assessments (HECA), also known as High-Energy Observations.

"If our safety observations are focused on compliance, checklists, and paperwork, we are missing an important opportunity. When performed well, site visits allow us to learn from front-line employees, focus on the energy, and improve our ability to control the 'stuff that kills you' (STKY).

To be effective in these engagements, we need technology like Urbint that surfaces STKY so that we engage in the right places, at the right time, about the most important things."



Dr. Matthew Hollowell, Executive Director, Safety Function & Professor of Construction Engineering at the University of Colorado at Boulder



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Urbint offers free demos for educational use. Students learn the factors contributing to safety issues in various industries, learn to use Urbint to plan for inherent industrial dangers and to prevent injuries, while saving time, money and lives.

Minimize Escaped Defects

Proactively identify new and critical exceptions, and prevent them from negatively impacting customers.

EVENT	STATUS	DESCRIPTION	IMPACTED	EVENT LOCATION	ERROR RATE	COUNT	FIRST SEEN	LAST SEEN	
Swallowed Exception	CRITICAL	NoSuchMethodException: java.lang.Class.getNestHost()	2 services	RejectedExecutionException: ATaskcom...	100%	201	1 month ago	4 mins ago	🗑️ ✓ ⋮
Swallowed Exception	NEW	Using Pauser.sleepy() as not enough processors, have 1...	4 services	CountingServletOutputStream	98%	6,829	4 month ago	1 mins ago	🗑️ ✓ ⋮

```
Source File Name: XmlParseService.java
...
saxParser.parse(xmlStream, new MyHandler());
...
} catch (ParserConfigurationException | SAXException e) {

```

Automate Troubleshooting

Reduce developer toil by eliminating manual troubleshooting of exceptions in development, testing, and production environments.



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TEACH OUR BUSINESS IT STUDENTS THE LATEST IN DIGITAL SECURITY: AI-driven software program error and troubleshooting live tracking with instant identification of code and entry errors, as well as solution recommendations streamlines processes – reducing lead times, reducing costs and customer complaints, and accelerating time to ROI on projects.

Cognii Virtual Learning Assistant

Provide instructors with learning opportunities focussed on *continuous improvement*, to learn how to use AI tools to enhance education, and link these to eLearning / Moodle platforms.

Cognii's Conversational EdTech enables the best pedagogical practices known to learning science.

Virtual assistants and **chat bots** such as Siri, Alexa, Cortana and Google Assistant are an increasingly familiar products, simulating human to human interaction with the use of Artificial Intelligence. But these are general purpose assistants, used for consumer activities such as asking "What's the weather like?". **Cognii Virtual Learning Assistant** is the only virtual assistant that is designed and optimized for educational conversation.

Auto grading of short essays

Personalized tutoring feedback

Rich learning analytics

Cognii

What are the structures of a typical neuron?

Student

Neurons are the basic building blocks of the nervous system. A neuron consists of dendrites and a cell body called soma.

Cognii

Very close! Would you like to explain the neural transmitter?



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AI will require greater emphasis on teaching excellence

Excellent instructors should be valued as much as excellent researchers.

The former are our best means of building tomorrow's leaders and employees;

The latter are our best means of ensuring human progress that creates new jobs and industries.



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