

ChatGPT's Code Interpreter (And Other AI Initiatives) Could Revolutionize Education

And more on Meta's Llama, education LLMs, the Supreme Court affirmative action ruling, and Byju's continued unraveling

[Phuong Do](#)

Over the last few weeks, a quiet revolution has been happening inside the intersection of AI and education. Several of these developments could be read as harbingers of a safe and secure AI-enabled educational ecosystem, which until recently has seemed more like a fantasy than a possible reality to many. A few of these developments include:

1. ChatGPT launched its Code Interpreter feature
2. ISTE/ASCD announced Stretch, a chatbot for schools
3. Merlyn Mind created open-source LLMs to ensure safe outputs for schools
4. Meta released Llama 2.0 fully open sourced
5. Common Sense Media announced AI reviews and ratings

We'll break these headlines down one by one, but first, a couple quick messages:

Season 7 of the Edtech Insiders Podcast Is Looking for Sponsors

The Edtech Insiders podcast is heading into Season 7 with a bang this

fall, with Edtech CEOs, investors, and thought leaders lined up to bring listeners into the fold, and This Week in Edtech podcasts to keep them in the know. We're exploring a spinoff podcast specifically highlighting women in edtech, so keep your eyes peeled for more on that.

We are also planning more incredible events to continue to build edtech community around the world, with events in the works for the United States, Central America, Asia, and more.

If you're interested in sponsoring The Edtech Insiders Podcast, our newsletter, or our events, please send a letter of interest to sponsorships@edtechinsiders.org to learn more.

Company Proposals for the EdTech MBA Community Fall 2023

The Edtech MBA community was founded in 2021 to organize and gather graduate students to take action on their interest in the growing field of education technology. Since its inception, the community has grown into a global community of 1200+ students from top business schools and graduate programs, such as Harvard Business School, Stanford GSB and GSE, MIT Sloan, Wharton, Kellogg Northwestern, Chicago Booth, and London Business School.

Many edtech companies, including **upGrad**, **Amira Learning**, **Winnie**, **UBITS**, **Kyron Learning** and **Preply** (and **Edtech Insiders!**), have had top graduate student fellows working on projects such as product strategy and growth, product management, business development, and GTM strategy.

Companies, please [submit your project proposal](#) by Friday, July 21 at 3 pm PST / 6 pm EST. Please submit a *separate* Google Form for each project proposal!

Feel free to contact Hailey Carter (*EdTech MBA Founder & President*) at

Top AI in Education Headlines

1. ChatGPT Launches Code Interpreter

The first quiet revolution for AI in education arrives under the unassuming name "Code Interpreter," a beta feature which launched inside ChatGPT this week. This feature is currently only available for ChatGPT subscribers. If you are a ChatGPT subscriber, go to your settings, enable "Beta Features", and select "Code Interpreter" from plugins to check it out.

WTF is a Code Interpreter?

A code interpreter is a computer program that:

1. Accepts code instructions in one language
2. Translates the code instructions into another language
3. Executes the code
4. And if needed, translates the results back into the original language

In computer science, this usually means translating computer code written by humans (known as either 'high-level' or 'assembly language') into machine language (binary 1's and 0's), which can only be understood by computers.

This is all well and good for developers, but it doesn't do much for us plebes who can't write computer code. Until now.

What does ChatGPT's Code Interpreter Do Differently?

ChatGPT's code interpreter turns human language (things we actually say)

into Python (a high-level coding language), and then executes it.

Python, invented in 1991, has been the most popular coding language in the world for the better part of the last decade. Because it is so ubiquitous – used by tech companies, governments, academics and big corporations alike – Python has a vast army of users and user-created ‘packages’ and ‘libraries that extend its core abilities even further, especially for projects like data visualization and analysis. (Source: [Github](#))

Python surpassed Java and Javascript within the last five years as the most popular language on Stack Overflow, and continues to grow.

Code Interpreter can turn anything we ask it to do into Python, which gives it access to amazing computational abilities.

There's one more important factor here... ChatGPT has enabled Code Interpreter to *read* files that users upload, and it supports pretty much any file formats you can think of: TXT, PDF, DOC, DOCX, JPEG, PNG, MP4, AVI, CSV, JSON, XML, XLS, XLSX, CPP, PY, HTML, PDF, DB, SQLite, etc. (Source: [Beebom](#)).

Finally, like all code interpreters, Code Interpreter can also execute code and transform the output of that execution back into human language.

Let's put it all together for emphasis. With Code Interpreter by ChatGPT, you can:

1. Upload any file
2. Tell ChatGPT what you want to do with it
3. Receive your instructions translated into Python
4. Execute the code
5. Transform the output back into readable language (or visuals, charts, graphs, tables, etc.)
6. Provide the results (and the underlying Python code)

A Case Study: Why This is So Important

Here's a quick example of why this new tool is so important.

The US Department of Education has plenty of great open-source education datasets lying around for public use: here are [600+](#). In about 2 minutes, you can find, download to your computer, and then upload to ChatGPT a file like "School Neighborhood Poverty Estimates.csv", which tracks schools by their neighborhood poverty level (Low IPR = High Poverty).

Then, with a prompt as simple as "create some nice visualizations for this data" you get an amazing output, along with some written analysis of the results:

And that's what you can get in just the first 2 minutes. From here, you could:

1. Ask more specific questions (e.g., "Let's remake that geographical scatterplot, but use only the high-poverty schools, with IRP < 100")
2. Ask for different interpretations (e.g. "Set up a poverty ratio for each state with the number of high poverty schools over the total number of schools")
3. Upload and merge more data to interpret (e.g., "Now how does school neighborhood poverty correlate to college admissions rates?")

With credit to Phuong Do, who has looked into Code Interpreter's effects on Education in her blog [Daily Dose of Aspiration](#), this new tool also unlocks several aspects of AI for Education that have been previously out of reach, including the following:

ChatGPT Can Now Do Math, Even Advanced Math

As a large language model that uses probability to predict the next word in a sentence, ChatGPT has been notoriously bad at even basic math. The Wolfram plug-in helps if you use it, but Python, of course, is incredible at math, being the main coding language used by researchers and governments. ChatGPT can now solve qualitative or quantitative math problems

ChatGPT Can Now Analyze and Visualize Any Dataset

As mentioned, you can upload a file into Code Interpreter and ask it to analyze it. That might be the results of your last employee survey, the outcomes of your fantasy football league, or the rise in autism diagnoses. Literally, any data you have access to, as well as any public data set available (like those on this [extensive list](#)).

ChatGPT Can Now Read and Analyze Any Source Material

Did you notice that the list of uploadable files above included file formats like PDF, DOC, and TXT? That means you can upload just about any text or PDF file like, say, [Kant's Critique of Judgement](#), or Barbara Means [Learning Online](#) and ask detailed questions about its content. Book reports anyone?

**Credit to Ethan Mollick, a Wharton professor who champions the use of AI in education. He had early access to Code Interpreter and has called it a ['game-changer'](#).

2. ISTE/ASCD Announces Stretch, a Chatbot for Schools

ISTE (recently acquired by ASCD) recently announced their [Stretch chatbot](#) (not yet publicly available), which is purportedly a chatbot that is safe for school use. Stretch is trained on vetted, reliable information, designed for accuracy, and is even required to cite sources. The recognition by the non-profit that schools simply cannot use Gen AI openly without a walled garden approach is prescient, and I suspect several other education-specific LLMs

may follow.

3. Merlyn Mind Creates Open-Source LLMs for Schools

Merlyn Mind, an AI focused edtech company run by former IBM Watson Head of Education Dr. Satya Nitta, also announced the release of [education-specific language models](#), which can be trained on secure material, are safe to use, and are 'hallucination-free'. The company even released certain aspects of their model open-sourced on Hugging Face (a [safety module](#), a [12 billion parameter vetted information module](#), and a [teaching assistant module](#)). Merlyn Mind has plenty of other ideas up their sleeve for education LLMs, but open-sourcing key components has created a big win for the community.

4. Meta Releases Llama 2.0, Fully Open Sourced

In the tech world, Meta has continued to pursue its philosophy of open-sourcing its AI technology as a way to foster innovation and safety. [As of July 18th Meta's largest LLM, Llama 2.0, which is significantly more powerful and has a bigger training set than Llama 1.0, is available for free for all research and commercial use.](#) This is a big deal for the LLM community. While OpenAI and Google license their LLMs out with a cost per use, Meta is giving away the farm.

The Hugging Face open-source LLM leaderboard has already been topped with a [Llama 2.0 based 70billion parameter model](#). This means that there are more and more powerful tools available for both research and education, if we can harness the safety precautions, privacy rules, and liability issues to use them.

5. Common Sense Media Announces AI Reviews

[Common Sense Media just announced plans to review AI product suitability.](#)

[for kids](#). Non-profit Common Sense Media (where Edtech Insiders co-founder and co-host Ben Kornell hangs his hat) has previously reported that AI might [hit kids like a freight train](#). This is just another example of important effort being put in to get ahead of the dangers of AI – bias, misinformation, hallucinations, inappropriateness, privacy concerns and more.

Top Edtech Business Headlines

1. Kahoot! Goes Private

Kahoot!, one of the biggest Edtech success stories of the last decade and a crown jewel of the Scandinavian Edtech scene, was [taken private this week](#) by a combination of Goldman Sachs Asset Management, General Atlantic FT, LEGO Group's KIRKBI Invest A/S, Glitrafjord AS, and other investors and management shareholders. The price tag: **\$1.72 Billion**. *That's a lot of kroner!*

Kahoot! had gone public in March 2021 at the height of the pandemic (when Peleton stock was at \$148), but its share price had halved since September 2021, a clear casualty of the tech boom and bust (Peleton's stock is now at \$9).

Kahoot! and Lego had already been very much in... kahoots... for years; Kahoot! is one of the rare Edtech companies that shares Lego's penchant in licensing top intellectual properties like Marvel, Star Wars, and Disney (wait, those are all owned by the same company).

2. Newsela Acquires Formative

[Newsela acquired Formative](#) in a move to provide a best in class and all encompassing instructional tool for K-12 classrooms.

We're excited to see how the combination of tools that these two groups

have developed can work together to create an even more potent tool at a time [when K-12 students need more support than ever](#).

3. upGrad Explores Acquisition of Udacity

Udacity has been up for sale for a few months now, and it appears [upGrad is interested in an acquisition](#). upGrad, an India based edtech company, has acquired 10 companies in recent years, and this acquisition would come at a time when US based edtech companies are available for lower prices than those in India.

This will be an interesting case study, as the current era of edtech is marked by less available funding, more calculated and strategic moves, and mergers and acquisitions. Similarly, this potential acquisition comes at a time when the spotlight is on India's edtech scene, with Byju's taking center stage, but other big players like upGrad continuing to grow markedly as well.

4. The Continued Unraveling of Byju's

While the financial woes of Byju's have been in the news for weeks now, this saga will continue to unfold as [India's government begins to investigate](#) and more details come to light. We'll have to sit tight to see exactly what happens, and how this event will send waves through the edtech sector as a whole.

However, we wanted to highlight an article by Matthew Tower, linked below, which has a great deep dive into what has happened, what is happening now, and what we can learn from the Byju's crisis:

[Byju's is Falling Apart - EdTech Thoughts Weekly Update 6/27](#)

[Hello! I normally write a paid-subscriber-only newsletter on Tuesday mornings. In that newsletter, I provide a longer-form opinion on a few pieces of the previous week's news. I have a lot of fun writing it and many people](#)

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[23 days ago · 16 likes · 1 comment · Matthew Tower](#)

5. The Supreme Court Ends Affirmative Action

In education news that made headlines but already feels like years ago, [the Supreme Court finalized a landmark decision to end affirmative action at colleges and universities across the country](#). Colleges will no longer be allowed to consider race as an express factor for accepting new students, likely furthering discrimination against already marginalized races.

Educators are concerned that this ruling will continue to bar marginalized populations from accessing career opportunities, a problem that many Edtech companies have already worked to address and that will likely become a growing systemic problem that requires even more support and attention than before.

There has been growing pressure in the weeks since the decision for colleges to end [legacy-based admissions](#), with vocal supporters on both sides of the political aisle, including Harvard professor Larry Summers and South Carolina Senator and Presidential candidate Tim Scott.

If legacy admissions are indeed canned, corporate apprenticeship companies like Multiverse and Symba may see significantly increased interest, as may a variety of bootcamps and alternative credentialing programs.

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Recent Edtech Insiders Podcast Episodes

We've had some amazing conversations on [The Edtech Insiders Podcast](#) over the past few weeks! Check out some of our recent conversations for a deep dive into specific edtech topics.

Funding, Mergers, and Acquisitions

For a complete list of recent funding rounds, mergers, and acquisitions, [check out ETCH by Matt Tower for the full scoop.](#)

Funding

- [Secure Code Warrior raises €45M](#)

- [Leverage Edu Raises \\$40mn In Fresh Funding Round](#)
- [Latin American EdTech firm Mattilda bags \\$19m in Series A](#)
- [Loora raises \\$9.25M](#)
- [Kinnu raises \\$6.5M](#) (Congrats, [Hanna Celina](#) !)
- [FreeWheelin Secures \\$5.4M Series B for EdTech Platform Math Flat](#)
- [Vietnamese edtech startup Clevai raises \\$4m in fresh funding](#)

Acquisitions

- [Kahoot! taken private in \\$1.72B deal by Goldman, Lego, General Atlantic, etc.](#)
- [Newsela acquires Formative](#)
- [Tuition.io Acquires Wiley's Tuition Manager Business](#)
- [Toprankers Acquires Legal Test Prep Platform The Lex Guru](#)
- [PowerSchool to Buy SchoolMessenger for \\$300 Million](#)

What We're Reading

On top of all the notable headlines, here's a few selected articles that members of our team found interesting from recent weeks:

- [Why Tech-Savvy Sweden Is Banning Screens In Classrooms](#)
- [How Roblox Grows: From Virtual Playground to Global Empire](#)

- [AI and the next digital divide in education](#)

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