

BYTE QUEST

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Byte Quest is the article published by the CSE dept of Vasavi College of Engineering regarding the latest innovative Technologies and Software that have been emerged in the competitive world. The motto of this article is to update the people regarding the improvement in technology. The article is designed by the active participation of students under the guidance of faculty coordinators.

- Good ,bad or indifferent if you are not investing in new technology , you are going to be left behind.
-Philip Green
- Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road.
-Stewart Brand.

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NO MAN'S SKY

We all have fantasized about a universe which spans as long as we can imagine. We have seen games and books worthy of this fantasy. Now let's imagine a game which spans a City, we have a lot of games could do that. Let's take this further one step by imagining a Whole Country in a game. Another step, let's take terrain to be a whole world.

As the terrain size increases, it becomes harder and harder to imagine. Here comes the greatest feature of a programming language, it is called Procedural Generation which means with a base set of constraints, it creates the Terrain, Characters and Objects randomly. And its biggest Application so far is a game called No Man's Sky.



No Man's Sky features a phenomenal Terrain distribution of 18,446,744,073,709,551,616 planets spread across millions of galaxies that you can explore (mathematical constraint of a computer limits it to this number, else it would be infinite), with every planet having a possibility of having different forms of life (all of them are random), different sizes etc.

ASHWIN (CSE-B 3/4)

ULTIMATE BIG DATA COURSE YOU CAN TAKE ONLINE

Everyone is talking about big data right now. With more and more people logging onto the internet daily, the world is amassing millions of terabytes of data that could be invaluable for mapping trends in health, population, and demographics... if there are enough people to process it all, that is.

To help you upskill for one of the fastest-growing tech careers, we've partnered with StackCommerce to run one of the top-rated and most comprehensive big data courses,

which you can study from the comfort of your own couch right now at ScienceAlert Academy.

The Big Data Bundle contains nine different courses, with modules such as Oozie: Workflow Scheduling for Big Data Systems, and From 0 to 1: Hive for Big Data Processing.

By the end of the course, you'll be across all the basics of big data, and have a bunch of new skill to add to your resume.



MANOHAR (CSE-A 2/4)

GOOGLE'S AI CAN LEARN FROM ITS OWN MEMORY INDEPENDENTLY



The DeepMind artificial intelligence (AI) being developed by Google's parent company, Alphabet, can now intelligently build on what's already inside its memory. Their new hybrid system – called a Differential Neural Computer (DNC) – pairs a neural network with the vast data storage of conventional computers, and the AI is smart enough to navigate and learn from this external data bank. The DNC is effectively combines external memory with the neural network approach of AI, where a massive number of interconnected nodes work dynamically to simulate a brain. At the heart of the DNC is a controller that constantly optimises its responses, comparing its results with the desired and correct ones.

Take a family tree: after being told about certain relationships, the DNC was able to figure out other family connections on its own – writing, rewriting, and optimising its memory along the way to pull out the correct information at the right time. In other words, it's functioning like a human brain, taking data from memory and figuring out new information.

The approach means a DNC system could take what it learned about the London Underground and apply parts of its knowledge to another transport network. The system points to a future where artificial intelligence could answer questions on new topics, by deducing responses from prior experiences, without needing to have learned every possible answer beforehand.

By adding external memory, DNCs are able to take on much more complex tasks and work out better overall strategies. It can use its memory to represent and manipulate complex data structures, but, like a neural network, it can learn to do so from data.

In another test, the DNC was given two bits of information: "John is in the playground," and "John picked up the football." With those known facts, when asked "Where is the football?", it was able to answer correctly by combining memory with deep learning. Making those connections might seem like a simple task for our powerful human brains, but until now, it's been a lot harder for virtual assistants, such as Siri, to figure out.

With the advances DeepMind is making, the researchers say they're another step forward to producing a computer that can reason independently.