

GPU COMPUTING FOR DATA SCIENTISTS

[HTTPS://MEDIUM.COM/@TAPOSEHDR/GPU-S-HAVE-BECOME-THE-NEW-CORE-FOR-IMAGE-ANALYTICS-B8BA8BD8D8F3](https://medium.com/@taposéhdr/gpu-s-have-become-the-new-core-for-image-analytics-b8ba8bd8d8f3)

TOPICS

- *What is a GPU?*
- *Market Value and Popular Brands*
- *GPU's Purpose and Applications*
- *Do you know that GPUs are Used in Mining?*
- *Importance for Data Scientists*
- *CPU x GPU*
- *Conclusion*



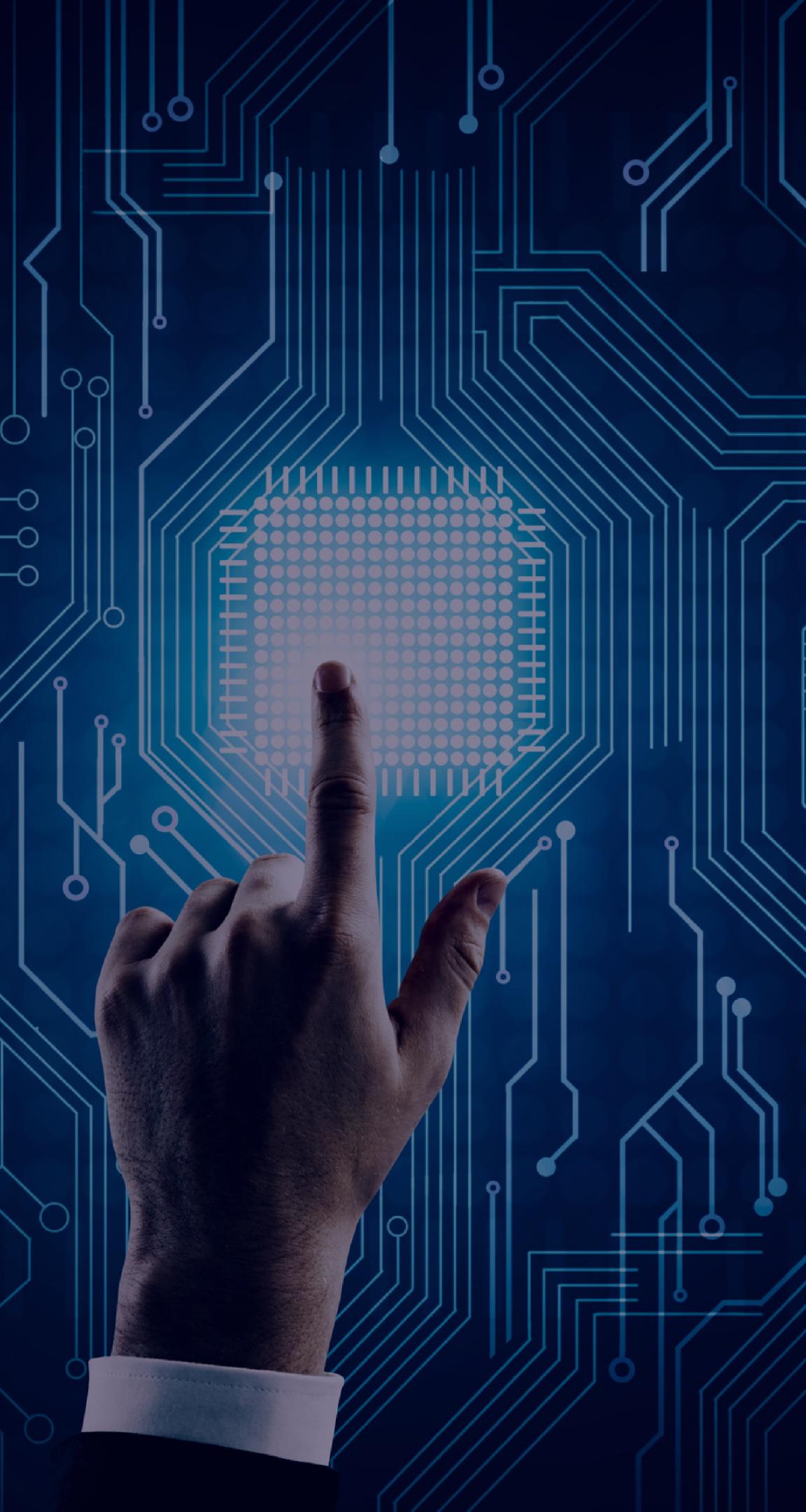


WHAT IS A GPU?

GPU stands for Graphics Processing Unit;

Computer chip that performs rapid mathematical calculations;

It was initially designed for rendering graphics and video processing.



POPULAR BRANDS AND MARKET VALUE

- NVIDIA is a leading brand in the GPU market, catering to both gaming and mining communities;
- AMD also offers competitive GPU options including for mining purposes;
- The rise of cryptocurrencies has driven up the demand and market value of GPUs.

GPU'S PURPOSE AND APPLICATIONS

GPUs are vital for accelerating various applications, including scientific, analytics, and consumer tasks;

Application areas include image restoration, segmentation (labeling), de-noising, filtering, interpolation and reconstruction;

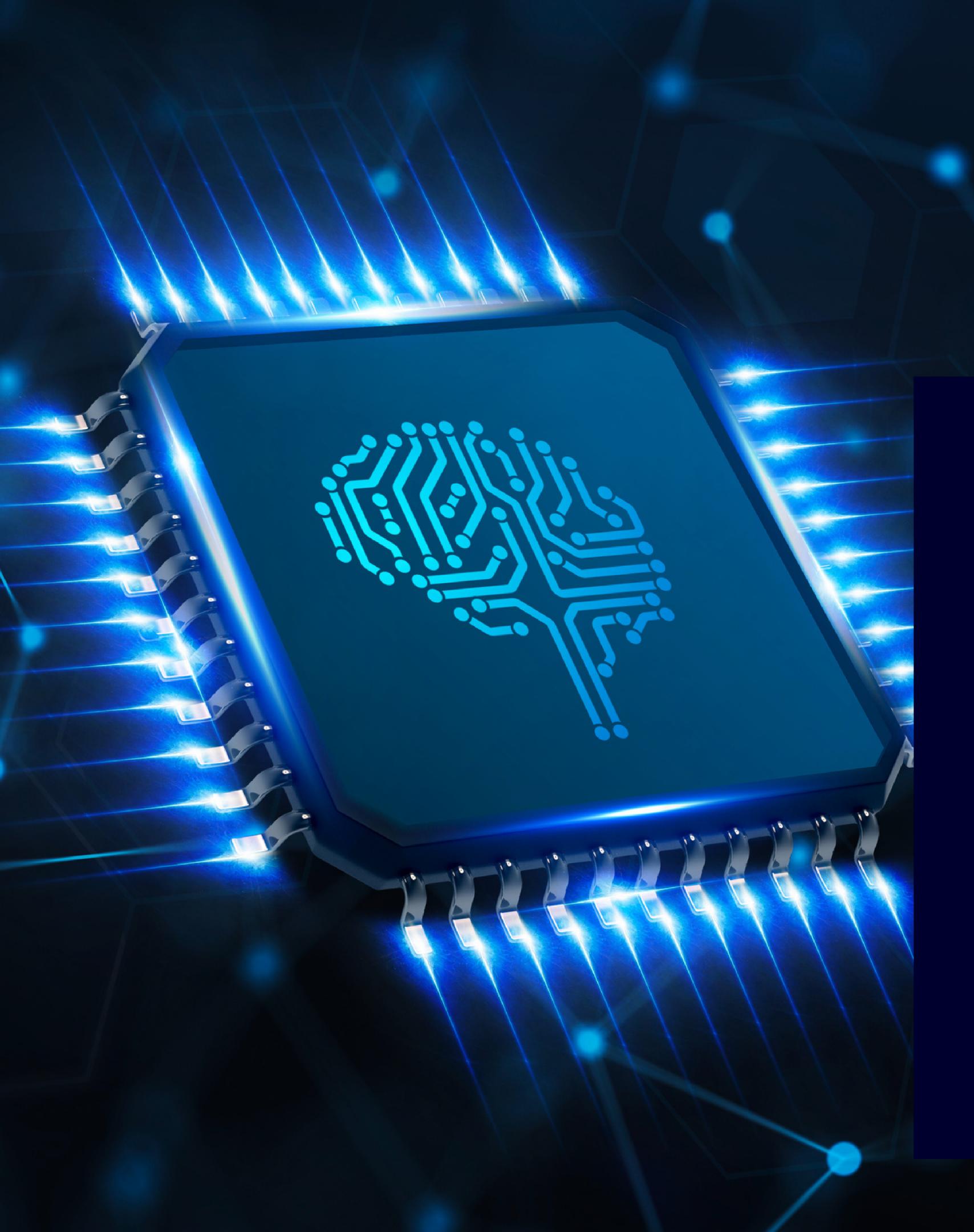
Applications of GPUs include machine learning, scientific simulations, data analytics, and cryptocurrency mining.





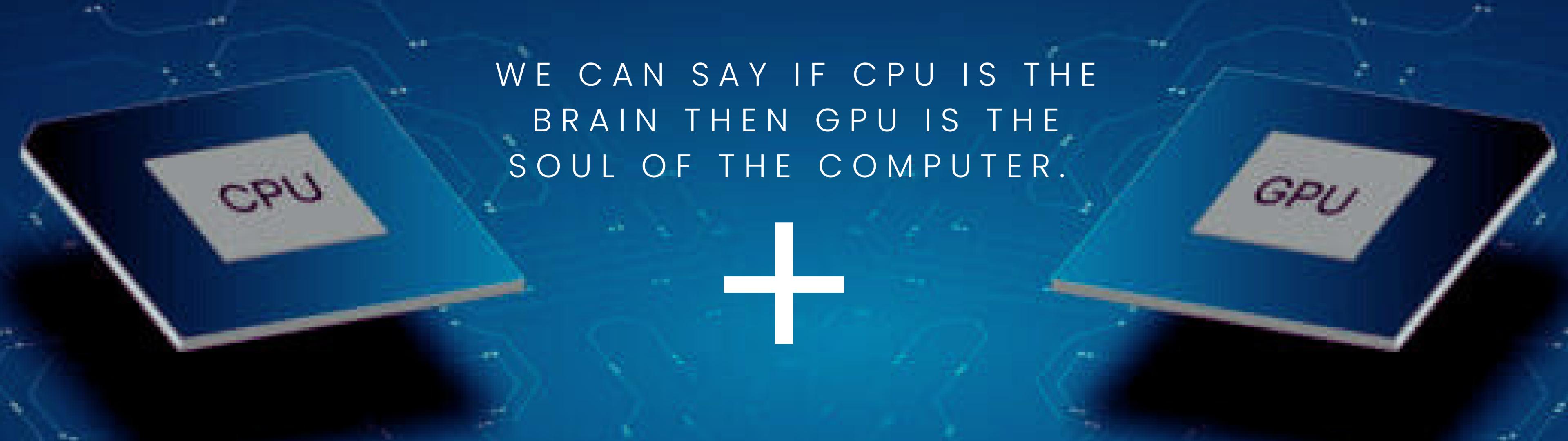
DO YOU KNOW THAT GPUS ARE USED IN MINING?

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- GPUs offer high **efficiency** processing **power** and energy efficiency compared to CPUs and architectural design make them ideal for mining operations;
 - Cryptocurrency mining involves solving **complex mathematical** puzzles to validate transactions;
 - GPUs allow miners to perform **multiple calculations** in parallel, significantly increasing mining efficiency.



IMPORTANCE FOR DATA SCIENTISTS

- They can significantly **accelerate** computationally intensive **tasks**, such as **training** deep learning **models**;
- GPUs enable data scientists to **process larger datasets** and perform complex computations more efficiently;
- Enhanced performance leads to **faster experimentation**, model iterations, and better decision-making;
- Understanding algorithm suitability for GPUs helps data scientists make informed choices.



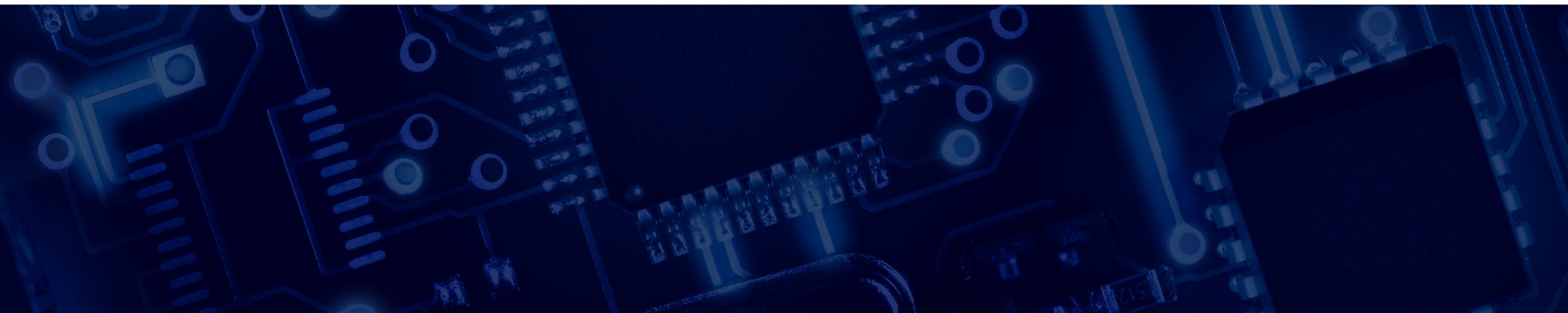
WE CAN SAY IF CPU IS THE
BRAIN THEN GPU IS THE
SOUL OF THE COMPUTER.



*GPU together with a CPU accelerate scientific,
analytics, engineering, consumer, and enterprise
applications.*

CONCLUSION

- *GPUs have revolutionized image processing for data scientists;*
- *GPUs offer high performance and cost advantages for parallel computing;*
- *Better matching of algorithms and frameworks when using GPUs;*
- *Next time, by a computer with a good GPU!*



THANK YOU