



**USA vs. China in AI at the end of 2022
Competition or Collaboration**



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- Collaboration with China? – This is a fairy tale!
That was the first response from my friend.

A similar response came in one of the comments to my previous article:
<https://itofthefuture.com/album/Technology/USAvsChinaInAI.pdf>

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First and foremost, plug the leaks. The theft of intellectual property is as bad or worse than the theft of tangible property. Second, China learned long ago that regulated capitalism is the driving force for economic prosperity. Ironically, American society is questioning itself and its commitment to free markets. (Lawrence K.)

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Completely agree!

But do you think that the recent law that prohibits the sale to China of AI chips and products is the best way of action?

I do not think so. It looks more like shooting ourselves in the leg. We harm our best companies, like Nvidia, and we prevent the benefits that always come from collaboration in development.

Although Nvidia quickly developed a new chip for China with a slower transfer rate to pass U.S. export controls, the damage is unprecedented.

What could be done better?

In two words: controlled collaboration.

It is possible to provide an umbrella for AI collaborative development projects.

It is possible to make sure that any export of AI chips and products can go under the controlled umbrella.

How to build this umbrella and how validate AI chips and products under the umbrella?

1. Let us take the first problem and try to solve it.

Collaborative development projects can be built with the [Development Factory](#), where AI helps to develop a project and serves as an umbrella for all such projects. Development Factory extends innovative human ideas with boring but necessary implementation details. Written in 2004 in [the message from 2040](#) as a science-fiction story, today this is a real AI conversational system, a work in progress.

A good example of a use case for the Development Factory is a [home project development](#). A user approximately knows what s/he wants and the Development Factory walks a user through each step optimizing the choices. The implementation is not finished yet, the site can be viewed as a skeleton demo.

Creating an umbrella for collaborative projects is a bigger-scale system, with the same or similar major algorithms and components, which include Nvidia products for Semantic Graph Understanding and Optimization.

The AI Conversational system will check every step in the development to make sure that it is within a specified knowledge domain and towards specified goals. If this is not as powerful as Isaac Asimov's "Three Laws of Robotics", this might be a step in the right direction.

Another piece of this puzzle is how to connect exported AI components to these projects.

2. How to ensure that the AI chips and products are just used within validated projects?

There are several Product Checking Systems, for example, at Leadtek Research Inc. (<https://www.leadtek.com/eng/support/validate/>). Such systems validate the product ID, for example, NVIDIA serial number from Graphic Card labels.

Integration of these two solutions will allow us to tightly control development as well as related components.

Where do we need collaborative development in the AI area?

Many Electric Vehicle Companies, including Chinese NIO, use NVIDIA AI to power automated driving.

We can achieve an unprecedented breakthrough with collaborative AI development in international Healthcare, for example, with [FLARA](#), and beyond.

We can collaborate with Ukraine developers that smartly integrate AI with drones and Satellite systems. And we do that. They learn from us and we learn from them. At the same time, it is important to tightly control any collaborative AI projects, to prevent the wrong hands from getting there.

With controlled collaboration, we can control AI components and projects with AI technology.

This article may sound controversial from a political point of view. This is understandable. The focus here is not on a specific case and not on a specific country.

(Initial feedback to this article had too much focus on China as not the best sample for this story.)

But the story focuses on technology. The technology, which is based on AI allows us to extend collaboration with different countries while improving the safety of collaborative projects.

Please provide your comments on the article and of course, feel free to directly reply to me: jeff.zhuk@captureknowledge.org

Read more here:

- USA vs. China in AI Collaboration or Competition

<https://itofthefuture.com/album/Technology/USAvsChinaInAI-CollaborationOrCompetition.pdf>

- USA vs. China in AI

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- The message from 2040:

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