

Are You Ready to Change The World?

Nur Hasanah

One day, during a weekly meeting of research progress, my teacher asked this question.

“How would your research change the world?”

Amidst the discussion of backtracking algorithms and finding bugs in half-unfinished coding, I was thrown off-guard. For a couple of minutes, speechless, I racked my brain trying to find the answer. But at the end, I couldn't conjure a satisfying answer.

The simple question echoed in my mind long after the meeting was over. In the search for the answer, it also helped me realized the vision of a researcher.

As a researcher, our task is in a way similar to an architect: we try to find an empty lot – a problem – to construct a building – a solution. We start from the very base, slowly and carefully planning the sketch by assessing the problem from different aspects and preparing the proposed methods. We make sure that the building is unique by conducting investigation on previous methods. The construction starts by building the foundation and placing brick by brick, as we run the experiment in countless times, measuring ingredients and adjusting parameters to produce the best result. Then, the construction is beautified by our analysis and reasoning, and finally the statement of conclusion completes the work.

An architect is proud of his building; we are known from the publication in journal or conferences, from where fellow researchers will seek further improvement. However, the difference lies on the limited space of empty lot in the world – while our “empty lot”, problems, are never cease to exist.

Considering the unlimited possibilities to build a new solution for the problems, don't you agree that it is not impossible that someday our construction will take turns in changing the world?

In fact, I think this frame of thought should be possessed by every researcher: our vision is not just to find a solution of how to construct a third-generation low-cost and high-efficiency solar cell, or to isolate a new strain of DNA from anaerob bacteria that enables them to transfer energy from the sea surface to the bottom of the sea, or to build a new algorithm of quickest sort – but rather *to change the world*.

Does it seem utopis? At first, I also have the same doubt.

However, just like a building could not be constructed from a single concrete brick: the world change also would not be occurred in mere a day. It took 23 years from the first time fuzzy logic was proposed to be implemented in the first subway system in Japan. Some said that a proposed solution in particular journal paper will get in motion no later than five years later. Change is a process – but to bear in mind that we as researchers are eventually will contribute to the change should be a part of our conscious mind.

My teacher once said that things he learnt from his professor were not about the newest algorithms or the frontier methods in artificial intelligence, but how to be a problem solver. If we open our mind for possibilities, look carefully for problems, think about the solution, and keep our body and soul healthy and sound, we will surely be able to construct our own contribution to this world.

So, are you ready to change the world?

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