

Future Plans & What I dream for? -- Xinjie

To be honest, I am always strongly led by my own interests/meanings/goals. This characteristic is the most inherent reason for everything about me. On one hand, I am always keen, self-motivated, and actively engaged in things I am interested in. On the other hand, I find it very boring and anguishing to do things that I have no interest in.

I hope my life is exciting, which means I can't wait to experience more, rather than having to encourage myself to be passionate about it. I think there are two components that weigh the most. First, community - I deeply value the exchange of ideas and thoughts with friends and peers. The opportunity to discuss innovative work and new visions is incredibly fulfilling. Second, teaching or interactive leading - I find the process of preparing and delivering teaching experiences exhilarating. It is wonderful for me to consider "how to visualize or convey a complex concept" and "how to picture a field in general and also in depth?". It is sure that I do feel excited about these two things and I want to follow them, even though I understand this may seem childish or unbelievable to some people.

I hope my world is reasonable. There is no blame from me to any education system or society here. What I want to express is that my vision can't explain some daily happening things around me, therefore curiosity exists and asks me to reveal the inner function or patterns of phenomena. Driven by them, I also have collected resources/networks of securities companies, incubation institutes, angels, and academic researchers, and learned basic knowledge about finance, economics, patent laws, analysis of business matters, entrepreneurship, and design systems.

So what do I dream of? I hope I can be a professor in a university, enjoying the freedom of research and teaching and living in a community of peers. Meanwhile, I can also be an entrepreneur, contributing to real-world applications. This could be too far, what is its previous step? Yes, being a PhD student and graduate. What could be its previous step? Yes, being an intern and checking if I am matched with my professor of idea, Prof. You (if you are a professor and you are watching this file).

So how can I achieve my dream? One paradigm I developed and used to guide myself is that "BACKPROPAGATION", which is quite similar to the backpropagation algorithm in neural networks. Every time a huge and tough goal is proposed, try to partition it into small and feasible sub-goals with clear inheritance and levels. As long as the current sub-task is too hard to achieve, partition it again, until the sub-sub-task is easy to achieve. It sounds pretty simple, right? But it is not easy to do it in practice. In practice, the inheritance relation is not always clear or even non-existent. Finding a path from the current state to the goal by backpropagation always faces risks that the path does not exist or is not feasible. It is also hard to partition a huge task into small tasks, and it is also hard to find a feasible path from the current state to the goal. Sampling, exploration, and exploitation, everything I have done can only be treated as a trial, and I learn from data points and experiments, observe, conclude, and then adjust my path with the new knowledge, finally enter a new round of sampling, exploration, and exploitation. (Approximate) correct path reveals itself in the finite times of trials.