Intelligence Information Systems

I want to enable the Information Systems to be more intelligence. Currently, most of the data inputted by systems is structured data. I want to improve the systems that they can understand what people say and write. So the system can help us analyze and predict business prospects based on some important documents.

There are two main innovative functions of this system. One is unstructured data input and output. The other is data analysis among these different types of data. For the first one, how to understand human’s language? My system will use Natural Language Process (NLP) to “read” or “listen” people’s language. Moreover, when the system can know user’s questions, it can answer them using the large business data in the system. It is even more efficient than experts. I think the technology for this function is mature since you can find a lot of APPs in the APP store, such as Siri, Google Assistant.

The second function is more important and also more difficult. The first step is to capture the key points from the documents or leaders’ speech. Why not manually fetch and input? This is because different people have different view for one document. The important part could be missing by manual process. So the way that I will do is just to input these original data and results. So the system can study by itself and become an expert in enough cases. And then the second step is to combine structured data to analysis and forecast. Due to analyze the CEO’s speech and another important documents to understand the company’s strategy, the system can check the financial, sales and production data to see if these data meet requirement and give feedback to decision maker. I know this is very difficult at the current stage. But it will be my long term goal to fulfill.

I think this system can attract many companies. It is not necessary to accomplish all functions before selling to employer. Some basic functions can also add more values to the company. For example, the company’s staff can communicate with systems by human’s language rather than the programming language.

How to implement this systems? Iteration will be the most important mode. The reason is I cannot estimate the precise results. Most technical tools are emerging and may have some issues. Many problems didn’t have solutions. So these functions could be finished step by step. And we can test each independent prototype and see if it meet customer’s expectation. For this function, there are many unknown issues and problems. So although analysis and design up front is necessary, we need to revise and upgrade our design all the time. Furthermore, the single person project may not be suitable for this system. We can use Scrum methodology to perform this task. Self-management can make our decision to be as reasonable as possible. The risk,

For this project, I set up the low level and high level goal. The basic functions such as seamless communication with staff can bring great convenience to the company. For example, CEOs don’t need to know the input and output data structures and how to use this system. They just talk to the system what they want and then the information can be displayed. On this basis, we can improve the high level of this system to make it to analyze complicated data and give some feedback to people by its own view.