Webinar on Enter the Data Word – Careers Integrating Data Science and Policy Knowledge
29 January 2021

Webinar Summary

Ms. Anna Lin, JP, FCILT, Chief Executive, GS1 Hong Kong (https://www.gs1hk.org/)
<u>About the work of GSI</u>
- GSI is a global non-profit organization providing a standard for barcode numbering system.
- Use a systematic numbering system to provide product information on "What, where, when, why"
- Enables end-to-end visibility in both local and global supply chain
- Help expand markets, e.g., cross-broader trade and international trade

<u>Applications of barcode</u>
- Amazon: To identify identical products for better products management
- Connect different data bases
- IoT application: RFID tag
- Applicable areas: E.g., Retail, healthcare, vaccine, constructions, logistics
- Additional label: micro printing for brand protection
- Help businesses to "create, communicate, connect, construct" in the global business world

Dr. Berto Lee, Programme Manager, Civic Exchange:
- Work mostly as think tanks

<u>Work of think tanks/Civic Exchange</u>
- Spark new ideas, shape public policy and give recommendations to the government
- Civic Exchange focuses on environmental, economic, governance, social issues, with recent years focusing more on climate changes
- Engage stakeholders to drive changes
- Example: Public Open Space Research uses the media to spark discussions
- Flow of the work: background research → reframe debate →engage stakeholders → policy recommendation and follow-up studies
- Encourage dialogue between different actors / stakeholders

<u>Use of data</u>
- Enable evidence-and-knowledge-based policies
- Cycle for handling data: understand→ extract→contextualize→engage→debate

<u>Qualities for think tank</u>
- Keen interest on public policy
- Teamwork
- Interpersonal skills
- Familiar with research methods
- Have specialist knowledge
- Understand political, economic and financial process

Jeffrey Chan, Senior Data Scientist, BCG GAMMA

<u>Work of data scientists</u>

- "10% algorithm+20% technology (hardware and software) +70% change management (bring business impact)"
- Not just a person but work as a team
- Deal with data silos: aggregate data and deal with messy data
- Iterate the process of making hypothesis and use data to prove it
- Deal with business problems and understand how the clients run the business process
- Educate clients on the application of data analytics which includes senior level engagement
- Deal with the frustration that the client may not use / familiar with the developed model

<u>Tips for being a data scientist</u>

- Be friends with technology supports
- Understand business users

<u>Useful Courses</u>

- Google IT professional certificate
- How to think like a computer scientist (book)
- Deep learning specialization (Coursera)

Q&A Session

Q: Who funds the think tank? Who pays the salary?

Berto:

- Depends on different think tanks. For example, for Civic Exchange, there are private funding, funding by cooperation and government funding for conducting research

Q: Why is 1D barcode commonly used in supermarket but not the QR-code (2D barcode)?

Anna:

- Depends on the scanning device. To scan 2D barcode, an image camera is required.
- It will still be difficult to overcome the technical difficulties to use 2D barcode in retail industry, but it will be the upcoming trend. A more feasible way will be 1D barcode co-exist with 2D barcode.

Q: Do you think QR code will be replaced in the coming 10 years?

Anna:

- No and even QR code will have an increasing in popularity in the coming future.
- RFID cannot reach the popularity of QR code after 15 years.
- Do not even consider 1D barcode will be replaced.
- Different barcodes will be co-existing in the foreseeable future.

Q: (For Berto and Jeffrey) How do you convince people who have no knowledge with your work?

Jeffrey:
- Need a story line to explain to others will become easier.
- Will start with an analogy and build up bit by bit.
- As audience have limited attention span, so be careful do not make the explanation too long and try to use more analogy or examples they understand.

Berto:
- Try to show others a bigger picture and let them know how it can be beneficial.

Q: Can e-market completely replace traditional market with the help of barcode/ QR code? Are there any improvements made in barcodes to facilitate the development of e-market?

Anna:
- No, don't think so. Even HKTV mall has offline shops to facilitate its service.
- A complete replacement would be difficult as people would still like to have the shopping experience.
- There are even the rise of unmanned shops and experience shops.
- The ratio of online shopping will increase but 100% replacement will be difficult.

Jeffrey:
- Although digitization is inevitable, many things still require the human touch.
- Physical shops are still important for raising brand awareness.

Berto:
- Younger generation may be able to totally embrace e-commerce.

Q: How to prepare to be a data scientist? (A question from a year-3 student majoring in physics)

Jeffrey:
- Hire many people from different background but value the ability to decompose complex problems into small building blocks and solve it.
- If you can think critically and can code, then it is okay.
- The difficulty will be the business understanding as there are differences between a normal programmer and a data scientist. Being a data scientist really needs to understand the necessity to solve the problem.

Q: How to prepare to be a data scientist? (A question from a student majoring in business)

Jeffrey:
- Curiosity is very important as it can encourage you to improve your technical skills.
- Data scientist usually learn during the job, so curiosity is the main factor.

Q: Do you see data misused or misinterpreted in policy making?

Berto:
- Data can be only numbers so it can be difficult to contextualize as it can be interpreted in different ways.
- Need to have a more balanced view.

Q: What is the business model to maintain the service as it's a non-profit organization?
Anna:
- The main revenue comes from the member's subscription and also some of the profitable service provision.

Q: What are the obstacles when applying new technologies?
Anna:
- Do not see applying new technologies would be a big obstacle as we are quite forward-looking.
- However, the resources constraint is a challenge.

Q: Is there any moral issue on the use of data?
Anna:
- People talk about open data but there are still many problems with it.
- Different universities have approached to use of the data. Yet, the challenge not just as many proposals have stated on how to use the data.
- Still concern about the privacy of the users.

Jeffrey:
- Have a team to look at ethical AI to ensure there is no discrimination on anyone or taking advantage on anyone in the algorithm.
- Ethical AI needs to be implemented by the senior managements.

Berto:
- Easier to deal with if profit is not concerned as anyone can see the use of data.