CDT Students Visit to the NEXT++ Workshop in Nanjing, China

Five CDT students were given the opportunity to travel to Nanjing, China for the NExT++ workshop in early November 2018. The workshop aimed to explore the topics of Health and Finance with the lens of AI and high-performance computing. A whole range of issues was covered, from improving student wellbeing to blockchain applications in central banks' money supply operations.

Day 1 provided a fascinating overview of current health research in China and beyond. It was an excellent opportunity for us to engage in constructive and supportive discussions regarding the larger issues of ethics and data privacy.

Our own students Reham and Peter, together with the supervisor Richard Giordano, presented their work on AI in healthcare. They considered the role of AI in helping doctors make decisions and patient privacy.

Read Fernando's experiences:

> *A few days ago, I was given the opportunity to participate in the Next++ Workshop 2018 "AI in Healthcare and Finance" at the Nanjing University of Science and Technology. One of the topics which most resonated with me was the talk of Prof Chen Kang from Tsinghua University, "Blockchain and Fiat Digital Currency: The First Step". Prof Chen approached the dilemma blockchain digital currencies have presented to our banking institutions.*
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> *First, let's approach the blockchain general issues digital currencies present for banking institutions. On one side the central banking model depends on regulation for essential services as fraud-prevention, anti-money laundering, anti-terrorism, anti-usury lending, deposit insurance and controlling the financial health, which current blockchain digital currencies cannot provide. On the other hand, digital currencies give an enticing prospect of greatly reducing the yearly billion cost of maintaining the current physical-cash system, which is mostly expend in distribution, storage, printing and coinage costs.*
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> *In brief, the current central banking institutions desire a digital currency which allows no third party involvement, looks like cash to the final users, introduces programmable currency, is regulable and can be supported by the current financial model. This introduces some conflicting requirements, like the balance between the anonymity and regulation when implementing a digital currency that can be seen as cash by the people. Where transactions can be regulated by the Central Bank institution but transactions can be done offline, are accessible to all payees and no third party (commercial banks or companies) are not given all payment information.*

What was especially interesting for students who had attended a number of these workshops was how the research has progressed. The initial presentations delivered in Singapore were in their early stages, but over the last year or so, the work that has gone into developing the ideas has been considerable. A good example is the ALiVE lifestyle management app being developed by the NUS. Originally, this was named ‘Diet Lens’ and was focused largely on helping the user to manage their fat intake in order to reduce their likelihood of developing diabetes. Now, the app is being expanded to include support for primary care practitioners. Thought has also been given to how the app will be introduced to the general public when it is finally released. It was also lovely to see one student from Tsinghua university (whom Sarah first met in 2015 in Shenzhen) present with confidence.

Overall, the workshop was a great opportunity for international collaboration and networking around some of the most crucial research for tackling growing health epidemics. It was also a chance to see China, some of us for the first time.