LEARNING LADDER

Industry exposure

NUS-ISS has graduate programmes that offer students a career launchpad and hands-on industrial experience

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MS PHOEBE Xie, 26, had no formal information technology (IT) training, except for developing simple websites as a hobby since she was a teenager.

After graduating from the National University of Singapore (NUS) with a Bachelor of Science (Hons) in Real Estate, she started work in 2014 as a research analyst for a real estate consultancy.

The role rekindled her fascination for data analytics and artificial intelligence. She says: “This transformation of data analytics could be the next big thing, and I was passionate about learning the ropes to get into the industry so I could transform lives and create value.”

Most IT courses she found online were either too basic or too advanced. However, the NUS Institute of Systems Science (ISS) Graduate Diploma in Systems Analysis (GDipSA) programme covered the basics and advanced skills such as programming mobile applications and systems.

Ms Xie joined the 40th intake of this one-year full-time NUS-ISS course. To ensure the curriculum stays relevant for its students, the syllabus is constantly reviewed with input from the industry.

Says Dr Esther Tan, chief of GDipSA Programme, NUS-ISS: “The GDipSA programme is unique — it transforms someone without IT knowledge into an IT professional in a very short period of time. Of these 12 months, seven are dedicated to very intensive training in terms of lectures, workshops and projects.”

The next five months comprise an industrial attachment.

Ms Xie especially enjoyed the lectures on HTML (a web coding language) as well as the Application Development Project, which gave her a taste of real-life project management and tight deadlines.

She also gained valuable industry experience at iAPP, a financial technology company that has developed mobile application platforms such as ActiveSG for Sport Singapore.

Assigned to work on a global mobile remittance app, Ms Xie quickly honed her skills in Swift and Java for iOS and Android mobile development.

Thanks to her hard work, Ms Xie was offered employment with the company after the internship period.

She started work as a system analyst in February last year.

She says: “After gaining so much knowledge and hands-on skills from experienced industry lecturers in the ISS course, I am now equipped to comprehend systems, create mobile and web applications easily and step into the IT industry to pursue what I dream of doing.

“This course was a worthwhile investment, as I got a headstart in the IT industry. I never knew I enjoyed creating system applications so much till I had hands-on experience in this ISS course.”

It was the right choice

THE winner of best application for active mobility in the Land Transport Authority’s Transport and You(th) Hackathon, held in April last year, was a web application for the cycling community, called SHARE ROUTE.

It allows cyclists to share routes that are safer and faster.

Ms Jasmine Ng, 28, was part of the winning group, comprising her classmates from the Master of Technology in Knowledge Engineering (MTech KE) programme, offered by the National University of Singapore’s Institute of Systems Science (NUS-ISS).

A month earlier, Ms Ng and some coursemates had also participated in the Data Visualisation Hackathon, a partnership between NUS-ISS and the Monetary Authority of Singapore.

They emerged first with their interactive infographic that allowed the public to understand credit card debts better.

This hackathon involved three weeks of coding, building and creating the final product. Ms Ng even had to pick up Photoshop skills to create the visuals, and she also learnt how to see things from the user’s perspective.

“These experiences were like a test and validation of what I have learnt from the course. “We had to quickly come up with a technical prototype or solution based on real datasets and business problems,” she says.

Before enrolling in the NUS-ISS MTech KE programme as a full-time student in 2015, she was working at the Defence Science and Technology Agency (DSTA) as an engineer.

She holds a double degree in business and computing from Nanyang Technological University.

“I wanted to extend my knowledge in data science and analytics. The programme covers modules that I am interested in, such as Text Mining and Data Mining Methodology and Methods,” she says.

During the one-and-a-half-year course, she was able to get hands-on experience on various platforms such as R, Python, SPSS Modeler and Tableau.

As part of her final year assignment, Ms Ng got to work on a real-life commercial project.

She was given the task of developing a sentiment classification engine for ISI-Dentsu South East Asia on social media data that the company had collected.

The project was challenging as the engine had to cater for multiple languages and noisy data.

“This experience enabled me to see how analytics can be applied in a real-world setting and also honed my skills in coding.

“I was able to apply the skills that I have learnt for data exploration in my current work,” she says.

After graduating, she returned to DSTA and is now a senior engineer developing advanced analytics solutions to optimise manpower resources for defence procurement.

She applies data analytics methodologies such as Cross-Industry Standard Process for Data Mining, which she learnt from the MTech KE programme.

In addition to MTech KE, NUS-ISS also offers MTech in Software Engineering, Enterprise Business Analytics and the new MTech in IT Leadership programmes.

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