Designing the future

Armed with a degree in Engineering Product Development, Hu Yuan, 22, is set to make his mark on the world

What attracted you to enrol in the Singapore University of Technology and Design (SUTD)?

SUTD is a new university in Singapore and I was excited to be part of the pioneer batch of students. I liked that the university emphasises design thinking and has a unique pedagogy that focuses on cohort-based, collaborative learning, with a one-to-11 faculty-to-student ratio.

The school attracts like-minded individuals who have the passion and vision to help better the world through technology and design.

After going through one and a half years of common curriculum, why did you select the Engineering Product Development pillar for your degree?

SUTD offers four pillars (what we term our areas of study), namely Architecture and Sustainable Design (ASD), Engineering Product Development (EPD), Engineering Systems and Design (ESD), and Information Systems Technology and Design (ISTD).

Before starting school, I was already leaning towards the EPD pillar as I liked designing and building technological products.

All students go through one and a half years of common curriculum, or what we call the freshman year. It allows us to experience a little bit of each pillar through design projects and gives us more exposure in order to make a better choice.

I choose EPD as I was more intrigued by the subjects offered in that pillar.

How do you intend to impact the world using technology and design?

Many of us would have seen the SUTD advertisements with the accompanying tagline, A Better World By Design.

This is a motto that I can identify with and strive towards. With the technical knowledge and design experience, I hope to develop products of high technological value that will transform how the world functions.

Tell us about your internship in Brazil.

SUTD offers students a variety of choices for internships, such as with Brazilian aerospace company Embraer.

As Embraer’s Singapore branch did not have any positions for engineering or design-related work, we contacted its main office in Brazil. We were assigned to design the interior of a commercial jet cabin.

With little experience in aerospace or interior design, my internship partner and I spent two months in Singapore conducting market analysis and research, followed by another two months at Embraer’s headquarters in Sao Jose dos Campos in Sao Paulo, working with our mentors there on concept generation and prototyping.

We succeeded in developing more than 20 new ideas and features for various components in the aircraft cabin, including overhead stowage bins, in-flight entertainment, seats as well as lighting.

With the help of Embraer’s experienced engineers and technicians, we also built prototypes of some of the ideas to better demonstrate the concepts.

What is your career goal?

I plan to specialise in the Robotics track in EPD as I envision artificial intelligence, automated systems and autonomous robots to dominate the future of human technology.

I also hope to design and develop robotic products and systems that will make a difference in our daily lives.

At a glance:

| Scholarship: SUTD Undergraduate Merit Scholarship |
| Course: Bachelor of Engineering with a major in Engineering Product Development |
| Institute: Singapore University of Technology and Design |
| Duration: 3.5 years |

What is the Undergraduate Research Opportunities Programme (UROP) project?

The UROP offers all students the chance to engage in research projects. In my first year in SUTD, I helped to design an aquaponics system that can be built and maintained easily and affordably.

This system combines fish and vegetable farming in one eco-system without the need for supplementary nutrients and pesticides.

The project was successfully implemented during a recent Overseas Community Involvement Programme trip to Chiang Rai, organised by the Rotaract Club of SUTD.

During the trip, we built the system for a children’s home and taught them to maintain the system.

This is an excellent example of how our knowledge of technology and design can be used to improve the lives of others.