

# Sark Xing | Curriculum Vitae

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## Personal

Name **Sark, Pangrui Xing.**

Nationality **Chinese.**

Profession **Interaction Designer**, HCI Researcher, 24 years old.

I am independent, proactive, and able to play different roles within projects. I have a deep affinity with applying state of the art technologies in designing interactive products, systems. I very much appreciate Peripheral Interaction (allowing effortless interaction) and Radical Atoms (seamlessly coupling the physical and digital world). I possess the skill sets (e.g. rapid prototyping, user evaluation, and thematic analysis) gained from my bachelors and masters, allowing me to ideate, develop, evaluate design with aesthetics and value.

## Education

2018 - 2020 **M.Sc. Eindhoven University of Technology, Eindhoven, The Netherlands.**  
Specialized in designing interactive systems, services and investigated theories in the field of Human-Computer Interaction.

2014 - 2018 **B.Sc. Beijing Normal University, Zhuhai, Zhuhai, China.**  
Covered the whole spectrum of Design topics. Specialized in acquiring hands-on prototyping skills and developing classic and/or interactive products.

## Recognition

Exhibition **2019 Dutch Technology Week, Strijp S, Eindhoven.**

Award **2018 Excellent Department Graduate, achieved 87/100.**

Patent Xing, P. 2017. Folded paper toy kit. *CN 206,404,327 U, filed Dec 26, 2016, and issued August 15, 2017*

Patent Xing, Pangrui. 2017. The driver for folded paper toy kit. *ZL 201630571980.0, filed Nov 24, 2016, and issued June 20, 2017*

Short-listed Award 2016 China Universities Industrial Design Competition

Silver Award **2016 DiD Award (Dongguan Cup).**

Exhibition 2016 8th Guangdong Industrial Design Expo

Exhibition 2016 2nd Biennale of The Guangdong College Design Works

1st Prize Scholarship 2nd year of bachelors, *#1 ranked candidate* in the Industrial Design Dept.

3rd Prize Scholarship 1st year of bachelors

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## Experience

September 2019 - January 2020 **Bi-directional Interactions in Smart Home**, *Graduation Preparation*, TU Eindhoven.

In this individual project, the design opportunities for the integration of bi-directional interfaces in Smart Homes were explored particularly in a future where every object has its own intentionality. It investigated and compared different types of interfaces, together with frameworks to define the design direction, rationale, and fields of application. Consequently, this project proposed three prototypes that integrate intuitive system control and subtle outputs, namely bi-directional haptic interfaces. The ongoing design process has been reported and submitted as a work-in-progress paper to the *2020 ACM Designing Interactive Systems Conference*

September 2019 - November 2020 **Interactive Materiality**, *Design Project*, TU Eindhoven.

Together with a fellow master student, I developed an artifact named Puffy, integrating multiple sensors and actuators to create mimic behavior from a puffer fish, consisting of a Stewart platform, capacitive sensors to detect motions, as well as an inflatable to change its volume. Through various material explorations as well as by programming its complex behavior, the artefact provided an integrated aesthetic. My colleague and I have submitted the outcomes of this research-through-design case as a pictorial to the *2020 ACM Designing Interactive Systems Conference* discussing the design processes and user experience of interactive material behavior.

July – August 2019 **NTU IoX Center**, *Research Intern*, Taipei.

IoX Center, formerly Intel-NTU Connected Context Computing Center, is a organization formed jointly by Intel and National Taiwan University. During which, I acted as an individual researcher, analyzing the attributes of interfaces where different types of interactions (namely focused, peripheral, implicit interactions) take place. By categorizing the mental effort required on having control of the interfaces and demanded type of attention on perceiving information from the system. I consequently proposed a table of the characteristics of seamless interfaces.

April - June 2019 **Data-enabled Design**, *Design Elective*, TU Eindhoven.

Iteratively developed multiple IoT probes heavily exploited a campus IoT platform named OOSI and deployed them at two participants' residences to extract numerical data as inspiring materials for consequential data analysis, semi-structured interviews, which consequently resulted in the design for shared responsibilities.

February - April 2019 **Design for Focused and Peripheral Interaction**, *Design Elective*, TU Eindhoven.

Grounded on theories related to attention, calm technology, peripheral interaction, as one in the group of four masters, we developed a tangible music controller to effortlessly perform interactions with music streaming services while working behind the computer. I narrated seven Wizard of Oz user tests for the initial design and collaboratively evaluated it using both qualitative and quantitative research methods, to determine whether the interactions could be performed in one's periphery of attention.

February - June 2019 **Designing Intelligence in Interaction**, *Design Elective*, TU Eindhoven.

Equipped with fundamental knowledge about Neural Network, I designed a hair style recommender system called hAIr, which was trained by 1,060 images of people relating to 53 classified hairstyles. Although the trained neural network reaches an accuracy of 28.10% when validated with images that were not used for training, I filmed and presented a high quality demo video of how intelligence can play a role in interaction design.

- January - February 2019 **Designing Intelligence in Interaction**, *Design Elective*, TU Eindhoven.  
Equipped with fundamental knowledge about Neural Network, I designed a hair style recommender system called hAlr, which was trained by 1,060 images of people relating to 53 classified hairstyles. Although the trained neural network reaches an accuracy of 28.10% when validated with images that were not used for training, I filmed and presented a high quality demo video of how intelligence can play a role in interaction design.
- September 2018 - January 2019 **Social Interactions with Shared Systems**, *Design Project*, TU Eindhoven.  
Being engaged in a team of four Masters, we designed a system for shared experience, consisting of two interfaces and I was mainly in charge of the implementation of the physical interface. The concept was iteratively evaluated through consecutive usability tests, field deployment, and was exhibited on *2019 Dutch Technology Week*.
- 2016 – 2017 **Industrial Design Research Studio**, *Teaching Assistant*, BNUZ, Zhuhai.  
I led a team, consisting of seventeen bachelor's students, in the department of industrial design, organizing sets of activities with peer students in participating domestic and international design competitions, resulting in highlighted works on *iF Talent Award*, *DiD Award*, *3DDS*, etc.
- September - December 2016 **2016 DiD Award (Dongguan Cup)**, *Project Lead*, Dong Guan.  
In the collaboration with a senior designer, I ideated the original concept of Pikapika (a remote control-able origami) and in charge of the origami design, film filming, and editing. The design won a silver award among 3,200 submissions from over ten countries.
- August 2015 **2015 Dafen Maker Summer Camp**, *Contestant*, Shenzhen.  
A joint activity supported by Tongji University, Shenzhen Municipal Government and Dafen Oil Painting Village, in which I helped a local artefact merchant in exploring new applications of wooden-engraving. The design was awarded with a 3rd prize.

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## Languages

- Native Madarin
- Native Hokkien
- Fluent English

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## Skills

- Front-end **HTML/CSS**, JavaScript.
- Back-end **Arduino(C/C++)**, Processing, Linux/Unix Script.
- Database **OOCSI(data foundry)**, **Firestore Realtime Database**.
- Prototyping **Electronics**, **Foam/Laser-cut/3D modelling**, Sketching, GUI Mock-up.
- User Evaluation **Wizard of Oz**, Field Study, Semi-structured Interview, Thematic Analysis.
- Computer-aid Design **Photoshop**, **SolidWorks**, **Keyshot**, **Illustrator**, InDesign, Lightroom, Final Cut Pro.

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## Interests

- Running Everyday Running Tracker, 2019 Haft Marathon Eindhoven, 2019 Semi Marathon Paris, 2018 Half Marathon Eindhoven
- Swimming Freestyle, Breaststroke, Butterfly Stroke
- Open-sourcing PC Build Project, Light Messenger, Q and I, Puffy