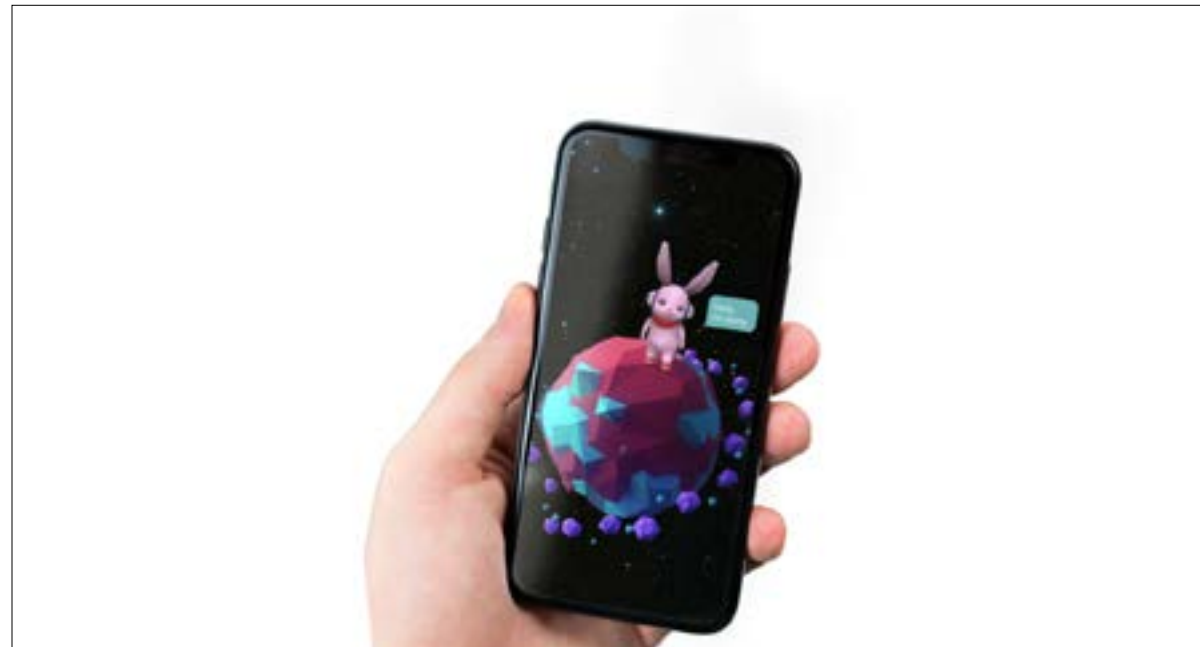# [INTERVIEW] Artist Hyejun Youn, Human Psychology into the Emerging Technology in 3 Days 2 Nights

<REMY>

INTERVIEWER: Hi Hyejun, we're going to talk about your competition and award at hackathons held at Harvard, Brown, MIT, and NYU, and how those experiences helped you explore the intersection of art and technology as an interaction designer. But to start off, let me ask you, what exactly is a hackathon?

HYEJUN: A hackathon is a popular event for engineers and designers dreaming of working together to create a project using emerging technology. This intense experience of teaming up with students from different schools and backgrounds and making a completed project in a limited time, provides the opportunity for participants to understand their own capabilities, and expose themselves to a wide spectrum of perspectives. It really helped me understand the importance of collaboration.

INTERVIEWER: What background did you bring to your hackathon teams, and how did that background help you in the competitions?

HYEJUN: Well, I majored in Psychology and Digital Media, and in all the hackathons I've done, I really tried to find developers who could help bring my ideas to life. As a designer I play more of a creative role, and my colleagues are more focused on engineering and problem solving.

I: How does your work at hackathons compare to the art you've exhibited in Korea?

H: In my most recent individual exhibition in Korea, I displayed fine art and relatively conservative works in well-established media. The U.S. hackathons are all about using emerging technology and challenging the media itself, so the output is very different.

I: I understand. So what drew you to the hackathons? How did they fit in with your trajectory as an artist?

H: Studying at RISD (Rhode Island School of Design), I encountered the limitations many design majors face. Understanding engineering is often necessary for the creation of a project, but, there were only a few professors specializing in such fields in art school. Interactive artists or designers tend to be relatively poor at engineering and technology, which is why collaboration with engineers is important to make our work functional. Sadly, at least in my school, it's very difficult to find engineers who are interested in and understand the art and design fields. So, there are usually two options available to artists: one is to master engineering by themselves, and the other is to change the direction of a work, compromising with reality to make it less functional. In my case, I found the hackathons gave me a good third option, because they let me collaborate with a diverse pool of tech-savvy engineers and programmers to create my work.

I: From the four hackathons you've participated in, it seems like your works are all based on human interaction and involve human psychology as a key factor. Was it hard to maintain the clarity of your vision and

stick to these themes in a collaborative atmosphere?

H: I majored in Digital Media at RISD where I received my master's degree, and graduated from NYU with a Bachelor's degree in Psychology. My works draw from this background because they apply psychological content in emerging technology. I think my ideas were successful in hackathons because I took the time to carefully analyze existing hackathon projects statistically, which helped me realize that clear ideas and presentation through storytelling are most likely to lead to a good outcome. Unlike many competitors, I recognized the hackathon as an opportunity to demonstrate innovation, creativity and potential, not simply a chance to demonstrate quick and accurate coding skills in a limited time. Since I came up with interesting ideas from these analyses and interpretations, in most cases, my team gladly accepted my suggestions. And, this approach led to good outcomes as well. For example, in 'HackHarvard 2019' at Harvard University last October, more than 300 students joined the event, and each participant teamed up with those who had similar ideas. Since there were relatively few designer participants, students from Harvard and MIT were asking me to join their team since they needed a designer. But they usually did not have a clear project idea at that point, so I was able to explain and "pitch" my idea to them.

Hundreds of Students Spend Weekend Coding at HackHarvard's Fifth Annual Hackathon

I: And the HackHarvard Hackathon was where Remy was developed, wasn't it? Your team won second place overall?

H: Yes, and that's actually my favorite work. Remy started from an idea I had developed even before participating in the Harvard hackathon. While studying psychology at NYU, I thought about New York City, which usually strikes people as a big, romantic city bustling with people and activity. Yet in reality, it's also a city with a very high depression rate. People often feel they're being left behind, especially when they're not part of gatherings or groups. Many college students who've just entered adulthood often feel confused and depressed because of these two conflicting aspects of New York City. In fact, I personally had a hard time when I first came to New York. One of my professors, Scott Kellogg, had a course called Psychology of Addiction, where he said anyone who had a mental problem should get counseling and psychological services. But, for students with non-psychology backgrounds, it's not so easy to seek treatment, even when they are struggling with depression. They rather tend to rely on alcohol or medication because of prejudices and stigma around receiving psychological services, and this just makes the symptoms worse. So, I created the Augmented Reality mental health friend, Remy, to address some of the problems with such experiences.

I: So what does Remy do?

H: Well, when receiving psychological counseling, it's inevitable to disclose personal information that hasn't been shared with anyone else, which requires courage. That's why Remy was created. This adorable AR friend collects a variety of information, from food intake to sleeping time, personal relationships, outdoor activities, and a ton of other information. Once it detects any early symptom of mental illness, it alerts a user and, at the same time, provides mental health hygiene tips. Since Remy feels more like a friend, rather than a counselor, users can share personal information at ease. We also tried to add a chat function to connect information to psychological counselors, if a user's symptoms get severe. Since all the team members have lived in New York, they empathized with my idea. And thankfully, we won second prize in the competition as well as the UIUX design award. Our photo was even published in the Harvard Crimson.

I: I see. It's an interesting idea, to have a cute buddy on your smart phone providing mental health monitoring and advice. But doesn't this create problems with medical professionalism or sharing sensitive personal information?

H: Great point, yes. That's why we designed the app to collect personal information only with the prior consent of a user. In terms of psychological professionalism, health hygiene is based on psychological research. Psychology is about correlation and statistics, it's not about mental illness being a direct result of certain behaviors or symptoms. When some symptoms are found, the increased risk and likelihood of mental illness is based on statistics. When these statistical signs show symptoms of mental health issues in the early stages, Remy gives simple mental health hygiene advice, and if they are above the intermediate stage, Remy would connect users with a professional counselor.

I. I see, that makes sense. So the hackathon itself must have been pretty intense, and with all the student participants, you must have some fun episodes or stories to share. Can you tell me a little about the process of creating Remy?

H. Harvard, MIT, and Singapore University students collaborated together to create Remy. Taking on a leadership role in the team, I worked on front end design, 3D animation, and directing and video editing, while collaborating with the Singapore member on UIUX. The MIT member was in charge of the back end. Surprisingly, the Harvard student used to be an actor in Hollywood, so he actually starred in the video which was used for presentation. In the beginning, when we didn't know about his career, I gave him an acting role, and all the members were just surprised at his professional acting skill, and some members even asked "how could you act so naturally?" (Laugh). Just on a side note, the project was also named by the actor. Remy is the name of a cat living on the Harvard campus. All in all we really bonded as a team. There's this MIT tradition, where visiting students climb up to the rooftop of the MIT library. So our whole team went to lie on the rooftop, and look up at the sky over MIT, before we came down and went back to Harvard to get back to work.

I: That's great, it's good to have a strong team dynamic. The hackathon is an intense, timed competition, so I imagine it wasn't all easy. Can you tell us about some of the difficulties you faced during the competition?

H: The biggest difficulty, in fact, was that none of our four members had any experience making an AR app. I completed the animation during the hackathon using a website that automatically generates animation. And for AR, the MIT member stayed up for two days straight, working extremely hard on coding and trouble-shooting. Anyway, we managed to create an app just as we planned. Generally, major IT companies, such as Google, Facebook, and Microsoft are sponsors of hackathons, and if a team makes a project by using the sponsor's device, SDK, or API, the sponsor company may additionally give a specific company's prize. But at HackHarvard, we engaged ourselves in the competition completely with our clearly defined goal, just as we planned, without worrying about trying to win sponsor prizes..

I: Let's talk about some of the other hackathon projects you developed. The SeeFit project you presented at the Brown University hackathon this year was designed to help and encourage disabled people to workout through an interactive app. Can you tell us more about it?
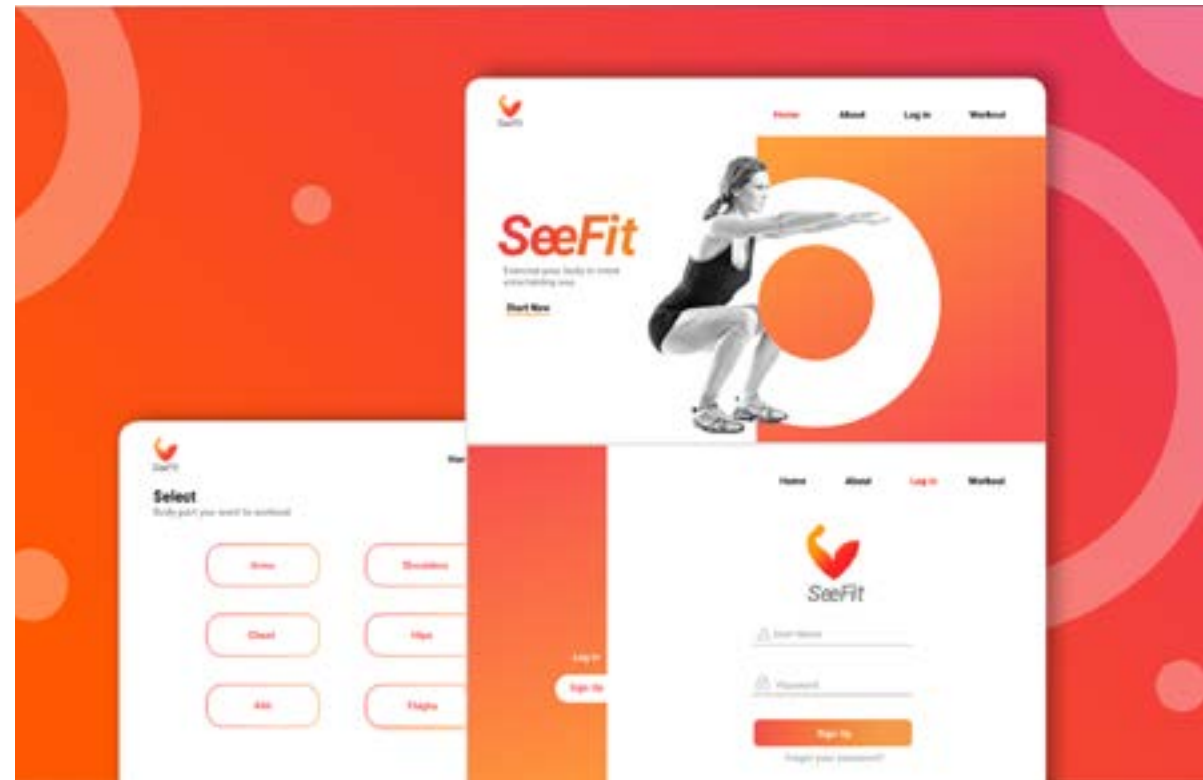
H: 'Hack@Brown2020' was a hackathon held in February before the spread of COVID-19 in the U.S. An idea just popped into my head during Graphic Design class, and I participated in Hack@Brown to make it real. At that time, I teamed up with three engineers from Carnegie Mellon University, Yale University, and Brown University, and at the beginning of the hackathon, there was some difficulty choosing between my idea and another teammate's idea. The engineer from Brown had a plan to make a crime app. She studies Data Science and wanted to create a map showing areas with high crime rates. I didn't think the idea was really competitive, since there are already a lot of apps showing crime rates in different areas. Ultimately, I was able to present my plan clearly and compellingly, and the rest of the team ended up supporting my idea. After that, we were able to work smoothly as a team without any trouble.

I: So how did the actual idea come about?

H: SeeFit started from my experience of helping Down syndrome children learn to dance and exercise their bodies to music at a volunteer organization which I joined when I was young. According to one statistic, a lot of disabled people have difficulty leaving the house because of perceived stigma and people's unwanted attention, and Down syndrome patients are more likely to be obese for genetic reasons. My idea was to find a way to help them keep active on their own, and I thought music could be an excellent and entertaining medium to help keep them moving. Also, from Professor AdoIph Karen's developmental psychology class, I recalled a study conducted by Dr. Rovee-Collier, which showed that if a mobile is attached to an infant's leg, the infant kicks his leg to move it. The research is about infant's memories – infants are able to recognize and remember the relationship between their movements and the mobile, which makes them constantly perform a specific action. My idea came from that research, and I designed an interactive project to help a user move and exercise by herself using a system that plays a sound according to a user's movement. SeeFit plays music when a certain gesture is made, and if the gesture is incorrect, an adorable coach pops up and teaches the correct movement. Both disabled and non-disabled people can easily enjoy the project and get their bodies moving. These days, there are many eye-catching, sensuously beautiful works with interactivity, but they often fall into the 'Instagram Museum' as they lack real content. I wanted to create an interactive project with meaning and purpose. The whole process, from visual design to coding was definitely hard, but it was absolutely worth the challenge. Fortunately, we received positive feedback, and even got the 'Best Real World Application' award. If there were more time, we could have added more visual interaction elements as well.

I: So you've won awards in all the hackathons you participated in, can you tell our readers what your secret is?
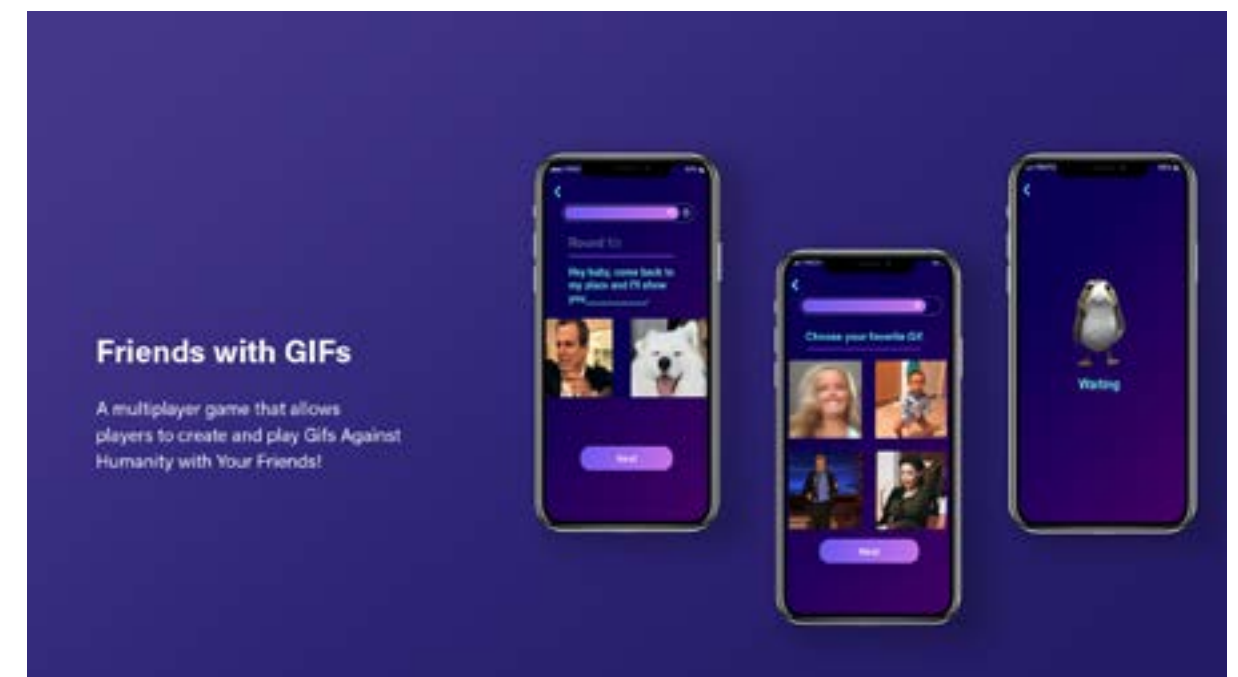
H: I think I was just getting the hang of hackathons after I received the "Best Use of Giphy SDK' award at 'hackNY Fall 2019' at New York University, and was listed as a finalist at MIT Hacking Art. Actually, the mental illness-related idea at the Harvard hackathon was discussed first at hackNY, but as the team members had difficulties with some technical elements of that idea, we decided to move in a different direction. I found 'Giphy,' a company that creates short animated images that are often used in Facebook or Instagram, among the sponsors of hackNY. They sponsored the Giphy SDK award for teams using their SDK in a project, and I suggested including amusing or meaningful content in our GIFs. One member came up with the idea of making a 'Cards Against Humanity'-type game, where whoever selects the funniest card according to a theme is the winner, and we decided to use GIFs instead of cards. I worked on the UIUX design, and the other members coded a program that automatically produced GIFs from Giphy SDK. However, we weren't able to complete the project on time. Luckily, I made a mockup UIUX video to demonstrate what the application would look like if it worked, and that's what we ultimately presented. In the end, we won the Giphy SDK award even though we didn't complete the app.

From receiving an award we didn't expect at HackNY, I realized that storytelling is one of the most important factors in convincing judges. After that, when looking for teammates, I would tell them that it's impossible to win an award if we just replicate widely used applications, and I would try to persuade them of the necessity of having a creative idea with a clear context and powerful storytelling. Another important factor is to meet the deadline. Most hackathon projects aim at technical perfection, which cannot realistically be achieved within the limited time of the competition. To be honest, even the ideas I proposed couldn't be accomplished within two or three days. The engineers also find it hard to completely finish their work in this limited timeframe. Nevertheless, the work is evaluated and judged during a 5-minute presentation. This means that once the project progresses to a certain degree, we can just cover up uncompleted parts by editing the presentation video. So I think the most important factors are the idea and how it is presented.

I: So what are your plans for the future?

H: Currently, I'm researching a human-computer interaction (HCI) device for soft robotics, with a PhD candidate at MIT Media Lab. Most of my work so far is limited to a computer screen, but from now on, I hope to create tangible projects that are practical and useful to people. Even though many of my plans have been delayed due to COVID-19 (including my return to the U.S.), I will continue to challenge myself to come up with new projects that help improve people's lives and make a positive impact.