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<https://www.kyutech.ac.jp/media/001/202110/tsushin58all.pdf>

## **I want to use robot technology to build a better society and use technology for the benefit of humanity.**

Mr. Ravi Prakash Joshi came to Kyushu Institute of Technology from far away India with a desire to learn and admire Japanese robotics.

How did he find his way to study in Japan and what results did he get?

What do he find attractive about robotics and its potential?

I listened carefully while being impressed by his cheerful personality and positive learning attitude.

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Senior Robotics Engineer, Tech Magic, Inc.

Mr. Ravi Prakash Josh

He came to Japan in 2015, completed his master's degree at the Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology in 2017, and his doctoral degree at the same school in 2020. In 2020, he joined TechMagic Corporation, where he is working as a senior robotics engineer on business robotics projects.

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Tech Magic Corporation (Headquarters: Koto-ku, Tokyo)

Established in 2018. Provides solutions for sustainable food infrastructure using cutting-edge technologies such as artificial intelligence machine learning and robotics. <https://techmagic.co.jp/>

## **I've always admired Japanese robotics.**

Ever since I was a child, I was interested in science and technology. I was fascinated when I saw pictures of Honda's ASIMO and Toyota's trumpet robots in the newspaper, and I was also quite addicted to the Super Mario game. At that time, I became interested in Japan and strongly wanted to study robotics in Japan.

This feeling did not change even after I went to university in India and got a job at an IT company after graduation, and my desire to study robotics in Japan only grew stronger. While I could not find a way to go to Japan, I attended a Japan education fair in India. Since I could not find a way to go to Japan, I quit my job at a well-paying IT company and became a researcher at the Indian Institute of Technology Delhi. It was there that I met Professor Shibata of Kyushu Institute of Technology, who had been conducting joint research with Indian students since 2007. I was completely fascinated by his research and lab facilities, and I decided to study at Kyushu Institute of Technology to learn more from him.

## **The results of my research in Japan**

Based on the belief that "robotics can not only promote technological innovation but also contribute to society as a whole," I did research on life support robots in Shibata Laboratory. The main focus of my research was on dressing assistance robots. This was a new field started by Professor Shibata, and because it was new, there was always a need for innovation. Japan and other developed countries are facing a labor shortage in nursing care, and it is expected to become more serious in the future. In order to solve this social issue, we worked on the development of a robotic system to assist the elderly in putting on and taking off clothes using a dual-armed robot.

This research attracted a great deal of attention in Japanese society, and we exhibited at the International Robot Exhibition, one of the world's largest robot exhibitions held every two years, in

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2017 and 2019, attracting national television and newspaper attention, and winning the Advanced Robotics Excellence Award from the Robotics Society of Japan. Furthermore, our research was highly evaluated overseas, and we had the opportunity to present our research at international conferences, which was a wonderful experience. I am honored that my research has been highly evaluated, and I am truly grateful for the guidance of Professor Shibata and many of my seniors.

### **Bringing Robot Technology to the Service of Society**

When thinking about my career path, I wanted to find a job in Japan because I knew that I had a lot to learn from Japanese companies, such as their high work ethic and perfectionism in product manufacturing. I chose TechMagic Corporation, established in 2018, instead of a major company because I thought I would be able to gain a variety of experiences since it is a venture company founded by young, ambitious, and technology-savvy people. The company's goal is to create a sustainable food industry using robotics, and is developing products to make up for the labor shortage in food companies through robotics technology.

For example, "finibo," an automatic dish sorting robot developed by TechMagic, is equipped with a 6-dimensional conveyor tracking technology that uses the most advanced AI technology developed by TechMagic to automatically sort dishes with high accuracy, and has been installed in a major airline. We believe that "finibo" and the other robot technologies we are developing at TechMagic will directly or indirectly benefit society thus humanity.

### **Bringing Technology Learned in Japan to India**

Almost everything I have learned at Kyushu Institute of Technology has been useful in my daily work. In addition to the knowledge and skills I learned in Shibata Lab, I also feel that what I learned about Japanese culture and ethics through extracurricular activities is very useful in my current work and life. My goal is to create an ecosystem that contributes to the development of society by making full use of robot technology. I would like to bring the technology, knowledge, and Japanese culture that I learned in Japan back to India with a mixture of Indian values and needs.

### **Interviewer's Point of Concern ANOTHER EYE**

#### **1. The power to learn**

My passion for robotics, which I have had since I was a child, is still alive and well. In addition, I learned a lot about local cuisine and Japanese culture from the volunteer activities I did when I was a student, and I learned casual Japanese from my lab mates. I have very happy memories.

#### **2. Curious**

I am a technology geek at heart, and do scientific research in the field of AI and robotics in my private life. Recently, I climbed Mt. Gozaisho in Mie Prefecture for the first time and was impressed by the view from the top.

#### **3. Independence and responsibility**

By leaving India and living in a completely different environment and culture, I believe that I have developed a sense of independence and responsibility. In the future, I would like to be able to educate underprivileged children in India and provide motivation to Indian students.