Grandfather inspired dream of invention for visually impaired

Masoumeh Hosseini; a girl with celebrated ideas to make life easier



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INTERVIEW

Masoumeh Hosseini, an 18-year-old Iranian girl who ventured into the world of ideation, inspired by the life of her blind and inventive grandfather, dreams of developing a smart device to assist the visually impaired; an instrument intended to alleviate some of their communication and everyday limitations. She has participated in several international invention and innovation competitions, where her ideas have won medals.

For Masoumeh, her grandfather was not merely a family member; he was an example of determination, curiosity, and perseverance in overcoming limitations. Abdol Shah-Palangi lost his sight during adolescence, but blindness could not distance him from the worlds of industry and invention. Relying on his tactile and auditory senses and imaginative faculties, he entered industrial component manufacturing, built machinery, and worked to localize certain components required by the automotive industry.

Now, his young granddaughter wishes to continue her grandfather's path through a different approach; this time, with the assistance of emerging technologies and artificial intelligence. Masoumeh Hosseini's first serious idea is the design of an intelligent assistant for the visually impaired: a small device capable of describing the surrounding environment — such as assisting with banknote identification, reading books and written materials, and even explaining certain facial cues — to a blind user. The idea originated from observing her grandfather's needs, but it is now intended to benefit other visually impaired people.

Alongside this project, Hosseini has ideas in the fields of pregnancy monitoring and medical record management; these projects remain at the design and assessment stages and require technical resources, capital, and collaboration with specialists to become marketable products.

In the following interview, Masoumeh Hosseini and her mother, Leila Shah-Palangi, discuss the life of Abdol Shah-Palangi, the genesis of the young Masoumeh's ideas, international competitions, and their hopes for support for innovative talents.



Masoumeh Hosseini, the 18-year-old Iranian girl whose ideas for quality-of-life inventions have been awarded in international competitions, speaks to a reporter at Iran Daily Headquarters on October 16, 2026.
REZA MOATTARIAN/IRAN DAILY

IRAN DAILY: Miss Hosseini, let us begin with you. How old are you, and what sparked your interest in invention and ideation?

HOSSEINI: I am 18 years old, and this year, I am in my final year of high school, studying mathematics. Since childhood, I have been interested in creating new devices and inventing things, but my grandfather had the greatest influence on the development of this interest. He was blind, yet he always wanted to build new things and help others. When I observed his life and became familiar with the difficulties he faced, I began to think that I could help others by designing new devices.

Did your first idea also emerge from these concerns?

HOSSEINI: Yes. My first serious idea concerns the difficulties faced by visually impaired people. My grandfather always wanted others to read books to him and help him acquire more information about the world around him. Sometimes, when he was talking to someone, it was also important to him to know how the other person felt; for example, whether they were angry, happy, or speaking with a smile. Observing these needs led me to consider designing a device that would enable blind people to obtain more information about their surroundings and other people's facial expressions. This idea began to take shape seriously in my mind when I was around 17.

What is the name of this idea, and what is it intended to do?

HOSSEINI: My idea is called "Eco Sight". My goal is to design a small, smart device for blind people that sits beside the forehead and ear and uses a camera, artificial intelligence (AI), a voice assistant, and a connection to a mobile phone to help visually impaired people better understand their surroundings and live more independently. The device can examine the environment through its camera and convey information to the blind user through an earpiece.



A visually impaired person hesitantly hands over several banknotes to a vehicle driver in India.
newzhook.com

The device will be able to identify obstacles and people nearby and explain what is in front of the user; for instance, whether there is a tree beside them or someone is crossing from the opposite direction. It will be able to also read written material, assist with banknote and product price identification, and provide the user with information about the surrounding environment. I want the device to be connected to AI and function like a voice assistant. The blind user should be able to converse with it, ask questions, request that it read books aloud or play podcasts, and perform certain tasks through voice commands.

One of the interesting aspects of your idea is facial expression recognition. How would this feature work?

HOSSEINI: Yes, this feature distinguishes it from other similar devices. The device is intended to use a camera and AI to recognize certain visible facial cues and explain them to the blind user through the voice assistant. For example, if the person in front of the user smiles or displays an expression indicative of anger, the device can describe these cues. This feature could assist the user in social interactions and provide them with more information in various situations.

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Ms. Shah-Palangi, to what extent do you think observing her grandfather's difficulties inspired your daughter, Masoumeh, to pursue ideation and invention?

SHAH-PALANGI: This was extremely significant because Masoumeh had witnessed firsthand the limitations that blindness imposes on everyday life. My father was extremely interested in reading books and staying up-to-date with world news and current events. Even during his final days in a hospital bed, he would ask us to bring him books and read them to him.

Sometimes, we did not have time or could not read to him at the very moment he wished. This saddened us because I could see how much he wanted to be independent and access information himself.

My father owned a shop in the bazaar, and despite his abilities, he sometimes encountered difficulties communicating with others. For example, he would say that people entered his shop, and when he asked who was there, they did not respond, leaving him unaware of whom he was dealing with. Even such simple situations can be difficult for a blind person. Masoumeh had experienced her grandfather's difficulties firsthand and considered whether she could use technology to alleviate some of these limitations.

When did your father lose his sight, and how did he enter the world of invention?

SHAH-PALANGI: My father lost his sight during adolescence. According to his own account, he was approximately 15 when a teacher's ruler struck his glasses, causing bleeding in both eyes. He subsequently underwent surgery, but unfortunately, his vision problems were not resolved.

My father also attended a boarding school for the blind for some time, but he said that he felt his pace of learning and performing tasks exceeded the pace of instruction there. He was an extremely active person and was by no means inclined toward idleness.

A friend named Jamshid played a significant role in changing the course of my father's life. After a period of isolation, his friend encouraged him to leave the house and look for work. At a workshop, my father became acquainted with the production of components such as washers, and this marked the beginning of his entry into industry. Gradually, he learned the work, acquired machinery, and entered the production of industrial and automotive components.

Operating industrial machinery is difficult for a blind person. How did your father manage to do it?

SHAH-PALANGI: He had an exceptionally acute sense of hearing and could recognize the sounds of machinery. By listening to the sounds, he could determine when a machine opened or closed, and he examined components through his sense of touch. He also employed workers, but he supervised many stages of production and personally performed a substantial portion of the work.

My father worked in the production of automotive components, washers, plastic parts, and automotive sound damping materials. He also gained experience with the materials and resins used in sound damping and tested various formulations to achieve suitable heat resistance. He registered some of his designs as patents and managed to expand his operations, eventually becoming the owner of a factory for a period. He started with limited capital and sought to domestically manufacture certain components required by the industry.

Miss Hosseini, let us return to your idea for assisting the visually impaired. Have you