Furhat Robotics

Press FAQ and Guidelines

Dear Journalist,

We politely ask you to link to our website, www.furhatrobotics.com, when mentioning Furhat Robotics, a member of our staff, or one of our use cases in your articles. As a small startup building awareness is crucial, and a backlink from a reputable news site has significant benefits for our site's SEO.

Thank you for your cooperation and understanding.

Who created Furhat?

Furhat Robotics was co-founded by Samer Al Moubayed, Gabriel Skantze, Jonas Beskow, and Preben Wik. Each of our co-founders contributed to the creation of the Furhat robot and they should be credited accordingly.

Why is the company called Furhat?

We came up with the idea of Furhat based on trying to find something that would cover the wires that protruded out of the head of the original robot. Someone in the team put a fur hat on the robot one day and the name stuck. You can read more about how it came to be here. As Furhat has iterated we have removed the wires, but both the actual fur hat and the name Furhat are now a recognizable and important part of our brand and our heritage.

How can I best capture Furhat for photo or video?

Shooting Furhat's face can be tricky, especially in bright environments. As the projector is competing with unpredictable lighting conditions, it can look washed out compared to reflective surfaces when shot in daylight. There are at least two ways to compensate for this:

   1. **Shoot two different exposures and combine them in Photoshop.**

With this approach you need a tripod and a lighting environment that is not too bright.

Take the first shot with the environment exposed correctly, faces of human beings etc.

Then take the second shot with the robot projection exposed correctly, with a shutter speed slower than 1/50s and the same aperture as shot 1.

In Photoshop, layer the two shots together and mask out the robot face on top of the robot and balance them together. This will most likely require some tweaking of colors and opacity to look right. The white balance for the robot face can be set with a neutral point from the robot's eyes.

2. Adjust the lighting conditions so that the projection and the environment can be decently exposed in the same shot.

If it is not too bright, it is possible to get a decent exposure where the robot's face is only slightly washed out, and can be adjusted in photoshop or Lightroom/Camera Raw to preserve as much detail as possible. Try to have a shutter speed of max 1/50s; if a higher shutter speed is used, the projection will be incomplete and most likely colored in either green, red, or blue. If this happens, it might be possible to adjust the colors in post-production, but it is far from ideal and requires some serious tweaking. But sometimes it might be the only option if it is a very bright environment.

Ideal camera settings for robot face exposure:
Shutter speed: 1/50s
Aperture: f/1.8
ISO: 100

Sometimes you will need a longer shutter speed and a smaller aperture to make the whole scene work. Longer shutter speed will work, but if there is movement in the projection it will become blurry if the shutter speed is too long.

Where can I find brand assets (logos, pictures, videos etc)?

You can find brand assets in our [press kit](#).

Where can I find press coverage on Furhat?

Please see our extensive press coverage section [here](#).

What is the difference between Furhat, Tengai, Petra etc?

Furhat is both the physical robot and the platform/operating system developed by us at Furhat Robotics. Our partners and clients can then build their own applications, or skills, as we call them, on our platform. Tengai and Petra are two examples of software built on and for the Furhat robot. [FRAnny](#), DB's travel assistant robot being tested in Germany, is another example.

[Tengai](#) is the unbiased interview robot developed in collaboration with recruitment agency TNG. [Petra](#) is the health pre-screening robot developed with Merck Group. Both are "skills" run on the Furhat robot. In short, you could say that all Tengai and Petra robots are Furhat robots, but not all Furhat robots are Tengai or Petra - the potential applications for Furhat robots are unlimited.

You can read more about Tengai, Petra, and other applications in our [customer stories section](#).

What is a social robot?
Social robots are a new type of computer interface designed to be used in social contexts, to interact with people. The goal is for them to communicate with us humans as we do with each other, by listening, speaking, and expressing some degree of emotion. Verbal communication and social interaction are skills we have evolved over thousands of years and as they come so naturally to us, there is little to no learning curve. By communicating with us the way we do with each other, social robots have the ability to connect with us in deeper and more meaningful ways, potentially removing the barriers between humanity and technology.

How would you explain the idea behind Furhat?
Furhat is a social robot that is capable of interacting with humans in the same way that we interact with each other. You interact with the robot through speech and other non-verbal forms of communication, which removes the need for devices such as

keyboards or touchscreens. The robot's face is an animation, meaning that it can be changed to suit different scenarios. It can be male or female, young or old, a different gender, or perhaps even a cartoon character. The animation of the robot's face allows it to express a broad range of emotions and gestures, enhancing the conversational experience. The result is a new type of computer interface that removes the barrier between man and machine, creating a much deeper emotional connection than you would get with other forms of technology.

We are building the world's first robot operating system, called Furhat OS. Alongside this, we are developing a conversational platform that allows developers to design conversational experiences for Furhat. In a similar way to how people develop applications for mobile phones today, the same method will be applied to social robots in the not-too-distant future. We envision that robots will become one of the main platforms and interfaces where a lot of innovation and application development will happen very soon.

How does Furhat work?

A back-projected animation system is used to project the robot's face onto a translucent mask. The robot's bust contains integrated sensors such as cameras and microphones, which allows Furhat to recognize people and understand what they say. There are speakers within the bust, allowing the robot to project its multilingual voice to users. The uniqueness of the Furhat platform is that the social robot can be adapted to suit the needs of markets across multiple industries. Our customers develop what we call "skills", which are apps for robots created specifically to suit a particular purpose. This enables Furhat to interact with people in a wide range of environments, and is not just limited to one or two use cases.

Can you give us some more details on your platform?

Social robots have countless applications in industries as varied as healthcare, transportation, training, customer service and recruitment. Each of these use cases is very different, requiring specialised knowledge and lots of resources. Rather than focussing on one or two industries, we have made the strategic decision to build the software, hardware and tools required to build powerful conversational experiences while partnering with some of the world's most innovative companies and developers to bring these applications to the market.

We also believe that for the technology to reach its full potential, we need to have very tight integration between the hardware and software. Think of the situation as analogous to when Apple developed and launched the iPhone. By owning the entire ecosystem, we can deliver a far greater quality product than companies that only build the hardware or software.

In which situations will we meet social robots in the future?

We think social robots will have the biggest impact in situations where we have already replaced human beings with less intuitive and less social forms of technology, such as touchscreens and computers. For example, we are currently trialling Furhat at Frankfurt airport together with Deutsche Bahn. If you think of most modern airports or train stations, we have replaced customer service staff with interactive kiosks and signs. Social robots that have a face, speak multiple languages, anf show empathy are a much better solution than the cold, transactional technology in widespread use across the world today.

Another example is recruitment. Together with Swedish recruitment agency TNG, we are developing the world's first unbiased interview robot. The idea here is to create a robot that is less biased than humans in the earlier stages of a recruitment process, where questions are skill and competency based.

Then there's digital healthcare. In Dec 2018, we trialled Petra, the world's first medical screening robot together with Merck Group. Petra is a social robot that can be deployed in public spaces help with early diagnosis of diseases such as diabetes, hypothyroidism and alcoholism.

These are just a few examples; there are literally thousands of ways in which robots will become part of our society.

Why should someone use a physical robot instead of a chatbot or other digital interface?
This is a question that is fundamentally about User Experience. One can argue sometimes that even a chatbot is not needed for certain tasks, and that filling a survey online would do the same purpose. The difference between working with pen-and-paper, a keyboard and a mouse, a touch screen, a smart speaker, an animated character, VR,

AR, or a social robot, is all about user experience. A physical robot provides a more immersive experience.

The core foundation of a social robot is that it is social - in other words, it allows the user to engage socially and emotionally with it, as if they were talking to a human sitting next to them. When people engage at that level, a lot of their behaviour is influenced. They express themselves better; they connect emotionally to the robot.

There are two key reasons why having a social robot, with a body, and a face, in the same room with a human, is very different from other ways you can have a person interact with technology:

Co-presence: Co-presence is the effect of sharing the same experience with someone else due to them being in the same physical space. Throughout human evolution, humans have always been co-present with each other (until very recently when the radio, TV, the phone, internet, etc have been invented). This meant that a lot of our evolution has been fitted to humans interacting in the physical space. This is extremely important for survival, building trust, emotional connection, etc. because when we have someone co-present with us in the same space, we believe that they share the same experience as us. Furhat has eyes, and a head. This means the robot can actively show that it is aware of the room and the user, and it can look at the human in the eyes, it can smile at the human, creating a sense of shared experience and connection that would be extremely difficult to replicate over video or voice-only interaction.

Proximity: Proximity is the study of physical distance and formation. Sitting 1 meter from someone is very different from sitting 2 or 5 meters. Proximity in sociology is a very big field of study of how people interact in the physical space, and how they form relations and engage emotionally and socially depending on the physical setup. Humans have a very high sensibility to physical distance; being too close is only for very trusted people, being too far is only for enemies, etc. Having a robot sit with you in the room means that we are applying very similar principles to human cognition as that of when people interact with each other.

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What makes the Furhat robot different from the other robots?

- Most robots the world has seen so far have been focused on movement and dexterity. Our robot is a social robot with the sole purpose of communicative interaction.
- Many other social robots have a simplified toy-like interface and not a human face.
- Furhat boasts a relaxed human quality that you don't get from other social robots – put simply, it feels like you are actually talking to a person rather than a machine.
- It has a customizable silica mask which uses projected facial animations in the form of features and expressions to deliver those human-like qualities – each Furhat robot can be customized in several ways to create unique characters with their own personality and quirks.
- Its brain is powered by a state-of-the-art conversational intelligence platform, Furhat OS – the world's first operating system for social robots – which can be programmed to participate in socially-aware human interactions.

What research is being done with the Furhat robot?
Here are a few examples:
- Language learning in multi-party interactions at KTH, Sweden
- Machine ethics at the University of Freiburg, Germany
- Detection of cognitive load at Heriot-Watt University, Scotland
- Uncanny valley effects in Uppsala University, Sweden
- Social and emotional intelligence in humanoid interactive systems at Aix-Marseille Université, France