



Bosch AI mission-bound to the ISS

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- ▶ **SoundSee** The SoundSee module is integrated in NASA's AstroBee. This autonomous robot will be able to find its way around inside the International Space Station on its own. The device will be transported to the ISS in May 2019. The SoundSee module is a Bosch AI-based system designed to monitor sounds made by ISS's mission-critical infrastructure.
- ▶ **Partners** The Bosch Research and Technology Center Pittsburgh and Astrobotic Technology developed the instrument in a joint effort with the NASA Ames Research Center.
- ▶ **Function & objective** This technology is based on an audio analysis function that will detect and recognize noise signals from machines on board the ISS, such as motors and pumps. Its machine learning capabilities will enable the AI module to eventually understand these sounds. The system will report any acoustical anomalies, with the result that repairs can be made early on, before a machine fails. This means it will be possible to quickly identify any deviation from normal operation, enabling the crew and ground personnel to respond that much faster, and gain deeper insight into the space station's technical status. Bosch will also use the data collected on the ISS for further research, with the aim of deploying similar modules in other systems, such as car engines.

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- ▶ **Model** The Bosch Center for Artificial Intelligence (BCAI) will exhibit a model of this device. An expert from the Bosch Research and Technology Center Pittsburgh will be on hand to answer questions about the project.