Sevensense

Visual navigation for the next generation of service robots

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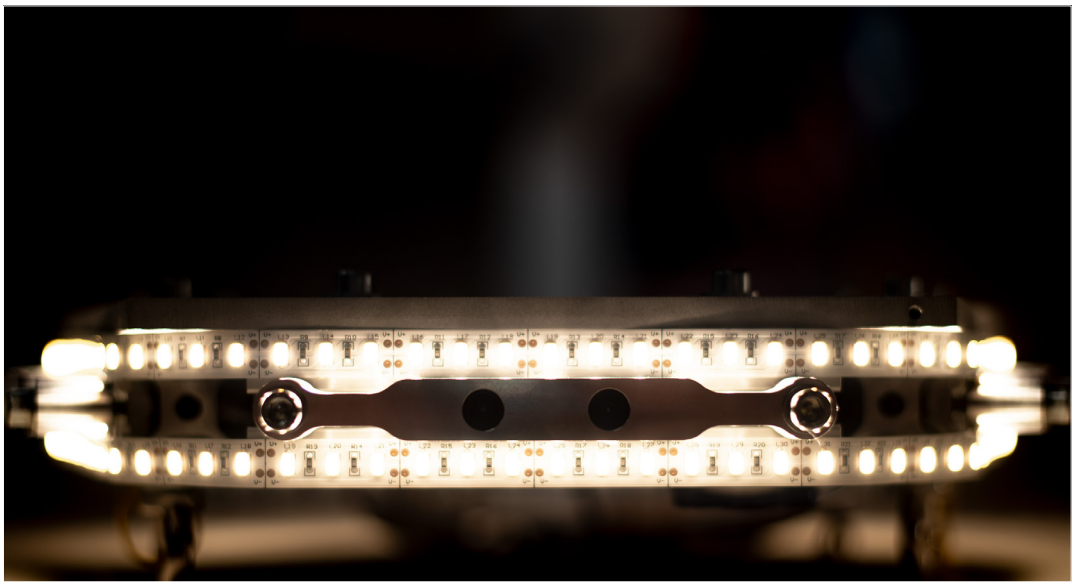

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Visual navigation for the next generation of service robots

Service robots have the potential to drastically increase efficiency in various industries by taking over repetitive tasks. However, the abilities of such systems are limited by today's navigation technologies.

Robots have become a crucial tool in many industries. Robotic manipulators are efficient at manufacturing and assembling all kinds of goods. Yet their use is limited to very constrained and static surroundings. The evolution of robotic tools for a broader range of applications requires more versatile technologies if they are to be used not only in highly structured factories, but also in more dynamic and busy environments that are shared with humans.

The fundamental technology needed to propel this evolution provides for autonomous mobility in unfamiliar and changing environments. It makes it possible to employ service robots in a wide range of applications, including industrial cleaning, material handling, delivery, surveillance and inspection.

Particularly in indoor spaces, where global positioning systems (GPS) are unavailable, the solutions currently on the market are either not sufficiently accurate or too expensive.

At Wyss Zurich, the Sevensense team develops solutions that enable robots to measure their position with a high level of accuracy and to navigate precisely and safely in dynamic environments. Similar to the human eye and inner ear, these systems process images from cameras and an inertial measurement unit to construct a map of the surroundings and pinpoint their position on the map.

Sevensense
is a Wyss Zurich project
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