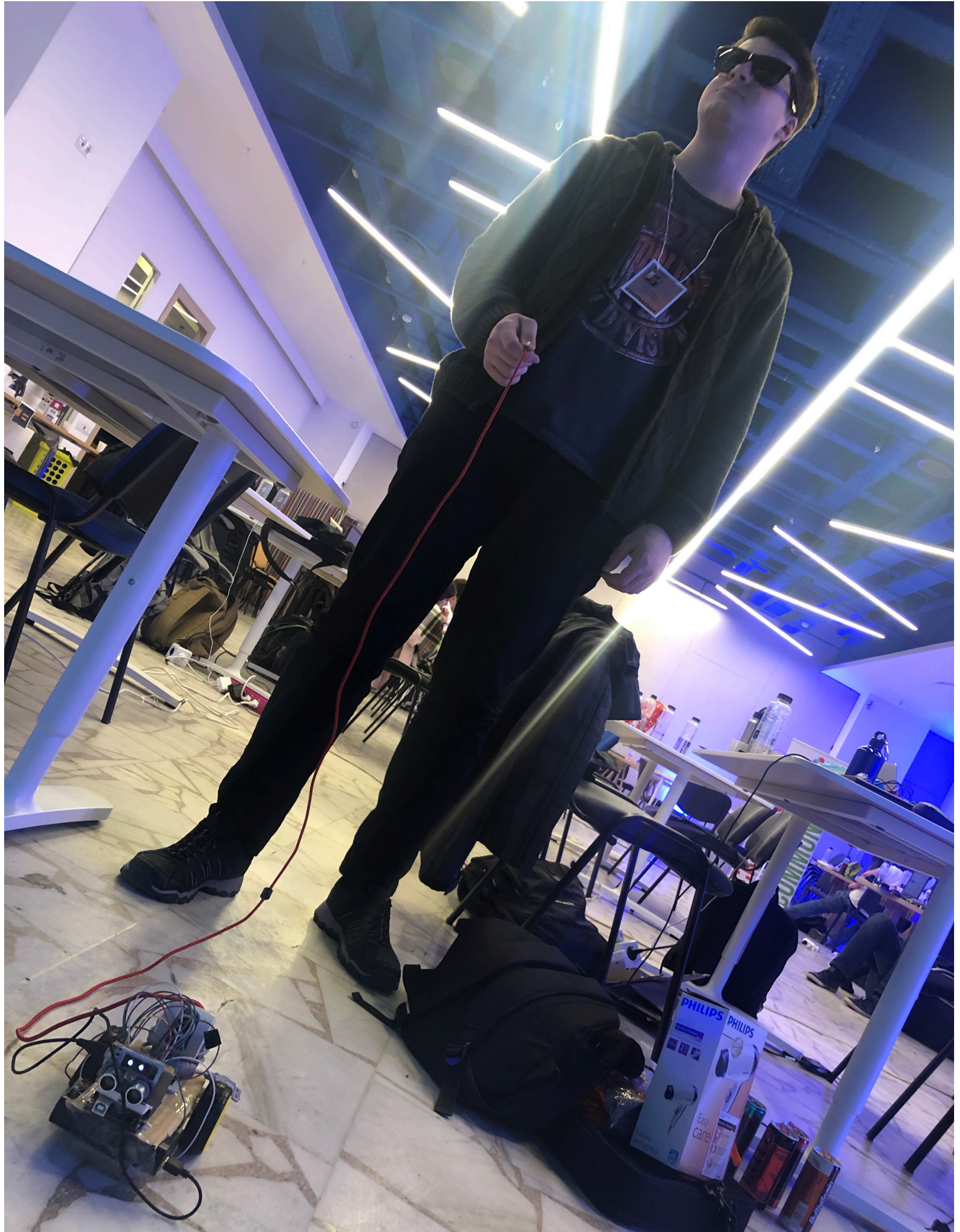


theNinjaCode

# Vision





Our team consists of 4 members: Ovidiu Moldovan, Amalia Daczo-Cadar, Tudor Campean and Vlad Petrenciuc.

Our project is part of the topic 'Sim4Safety'. We have developed a device that allows the visually impaired people to get a better description of what is surrounding them. Together with the companion bot, our project could make their lives better in a number of ways.

The device could allow someone to get an audio signal when they approach an object and give a distress call when they fell. The companion bot could feel like an assistant in a number of ways: it also knows the distance to the objects ahead and with a camera can tell the user a lot of the objects that it sees.

On the technical part, we have used an Arduino and a Raspberry which communicate via Bluetooth, another Arduino as the brain of the bot and we have exemplified the object detection and the communication to the user via a Python application and using the laptop's camera. It uses libraries like OpenCV and a pre-trained TensorFlow neural network. Running the code on the Raspberry with a PiCamera would also work good, but we didn't do that because we didn't have one.