



HACK „The T“

Competition assignment

Take control of robot Pepper T-Dee



Pepper T-Dee is a **humanoid robot** that you can meet, for example, at the Magenta Experience Center in Pankrac, Prague.

Customers **communicate with Pepper T-Dee by voice and using a tablet** placed on his chest.

Pepper T-Dee is **able to recognize faces** as well as up to five basic human emotions and then adapt its communication accordingly.

Its constitution resembles an **eight-year-old child**, its is almost **130 centimeters tall** and weighs less than **30 kilograms**.

Take control of robot Pepper T-Dee

Your task will be to falsify data for the robot, so it will be able to offer "*customers*" bachelor's, master's and doctoral study programs and fields of study at ČVUT.

Evaluation

- **The robot will be able to conduct a conversation with study applicants about individual fields of study**
- **It can suggest a suitable field of study based on the conversation**
- **Based on the expression on your face, it can evaluate whether you are satisfied with the proposed field and, if necessary, make a new proposal**

Specs of Pepper T-Dee Robot

Height	120 cm 47.2 in
Length	42.5 cm 16.7 in
Width	48.5 cm 19 in
Weight	28 kg 62 lb
Speed	3 km/h 1.7 mph
Sensors	Head with two HD 5-megapixel cameras (mouth and forehead), 3D sensor (behind eyes), four microphones, and three touch sensors. Torso with gyroscope. Hands with two touch sensors. Leg/mobile base with two sonars, six lasers, three bumper sensors, and a gyroscope.

Specs of Pepper T-Dee Robot

Actuators	20 DC motors
Power	30-Ah lithium-ion battery, 12 hours of operation
Computing	Intel Atom E3845 computer
Speakers	Two speakers
Tablet	10.1-inch tablet on the robot's chest
Connection	Bluetooth, Ethernet, Wi-Fi
Software	NAOqi operating system
	Choregraphe software development kit (SDK) and Pepper SDK for Android Studio
	Support for Python, C++, Java, and JavaScript
	ROS interface
Degrees of freedom (DOF)	19 (Head: 2 DoF; Shoulder: 2 DoF x 2; Elbow: 2 DoF x 2; Wrist: 1 DoF x 2; Hand: 1 DoF x 2; Hip: 2 DoF; Knee: 1 DoF; Mobile base: 2 DoF)

Specs of Pepper T-Dee Robot

SDK https://android.aldebaran.com/sdk/doc/pepper-sdk/ch1_gettingstarted/installation.html