BEFRIEND

Hardware assister for blind people

What is our motivation?
Some small everyday tasks can be challenging for blind people. BEFRIEND is designed to create a sense of vision, solve problems that they have to face with and make their daily life more pleasant.

How the system works?
BEFRIEND uses the computer vision system to capture and analyze the environment. The information is then transmitted to the user through headphones.

What is our solution?
A hardware tool assisting blind people in carrying out activities that are usually performed by themselves or others. It provides real-time information about the environment through a remote client-server system.

BEFRIEND
Change the way you see the world!
Obtain data from environment and process those data to inform user visually.

Image Processing
- Object Detection
- Image Classification

Real Time Video Streaming on Web
- UDP Client-Server Communication
- Real-time streaming of camera mounted on hardware
- Textfield to write directives to send back to the person in need

Team Visionary
- Visionary
- Developer
- Designer
- Writer

Thank you
BEFRIEND

Hardware assister for blind people

What is our motivation?
Some small everyday tasks can be challenging for blind people. BEFRIEND is designed to create a sense of security, solve problems that they have to face with and make them take more part in life.

BeFRIEND: Change the way you see the world!
Obtain data from environment
Process those data
Inform user visually

What is our solution?
A hardware tool helping blind people by giving information about the environment and sending a remote communication with a robotic arm.

Real Time Video Streaming on Web
- UDP Client-Server Communication
- Real-time streaming of camera mounted on hardware
- Textfield to write directions to be sent back to the person in need

How the system works?
Several sensors are strategically placed in the environment to send information to the person in need. A computer sends instructions to move items, distances and objects closer to the person in need.

Thank you
Team Visiondary

Members:
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BEFRIEND

Change the way you see the world!

Obtain data from environment
Process those data
Inform user vocally
What is our motivation?

Some small everyday tasks can be challenging for blind people. BeFriend is designed to create a sense of vision, solve problems that they have to face with and make them take more part in life.
What is our solution?

A hardware tool helping blind people by giving information about the environment and creating a remote communication with a relative. Information of recognized texts, distance and size of objects etc. will be provided through headphones.
How the system works?

BeFriend detects the objects using image processing techniques and the distance using sensor. Blind people are also able to send images and get help through a client-server network communication module.
Image Processing

- Optical Character Recognition
- Road Sign Detection
- Pedestrian Detection
- Object Recognition
- Logo Detection
Real Time Video Streaming on Web

- UDP Client-Server Communication
- Real time streaming of camera mounted on hardware
- Textfield to write directives to send back to the person in need
THANK YOU
BEFRIEND

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**What is our motivation?**
Some small everyday tasks can be challenging for blind people. BEFRIEND is designed to create a sense of mission, solve problems that they have to face with and make them take more part in life.

**What is our solution?**
A hardware tool helping blind people by giving information about the environment and reading, a remote communication with a relative, information about getting lost, distance and use of objects, etc. will be presented through headphones.

**Real Time Video Streaming on Web**
- UDP Client-Server Communication
- Real-time streaming of camera mounted on hardware
- Textfield to send directions to send back to the person in need

**Team Visionary**

**Image Processing**

**Prezi**

**Thank you**
BEFRIEND

Hardware assister for blind people

What is our motivation?
Some small everyday tasks can be challenging for blind people. BEFRIEND is designed to create a sense of inclusion, solve problems that they have to face with and make them take more part in life.

What is our solution?
BEFRIEND changes the way you see the world!

- Obtain data from environment
- Process those data
- Inform user visually

Real Time Video Streaming on Web
- UDP Client-Server Communication
- Real-time streaming of camera mounted on hardware
- Textfield to enter directions to send back to the person in need

How the system works?

1. BEFRIEND receives data from the environment through sensors.
2. It processes the data and determines the necessary actions.
3. The information is then conveyed to the user through audio feedback.

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