

# Image Recognition

Alex Dementsov

September, 2007

What is that?



... how about this one?

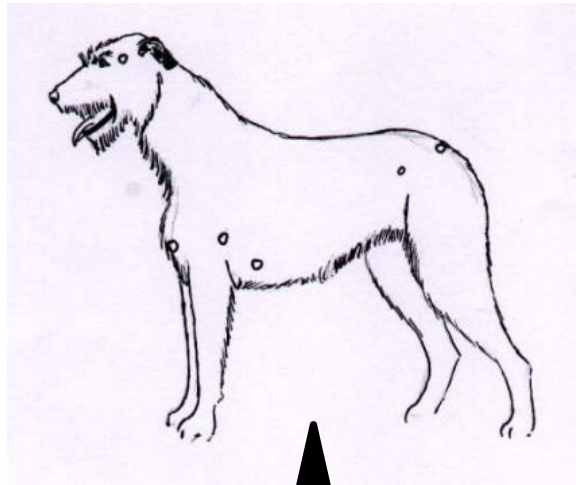


# How do you know that?

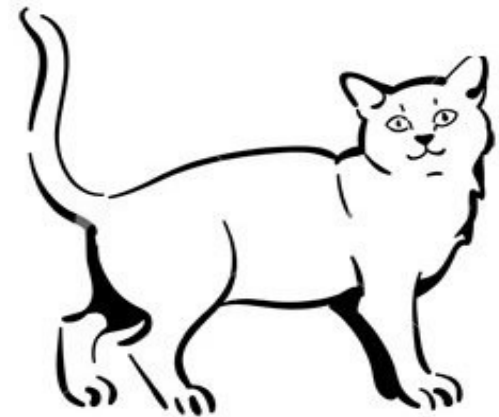
Well, because ...

1. Someone told us that ... remember?

**Model**



Dog



Cat

and ...

2. From experience

(face-to-face, pictures, movies ... whatever )

**Reality**



There is a finite probability that it might be a **dog** ... :)



Who knows, this **cat** surely looks happy ...

# Subject Area

- Images contain different kinds of objects
- It's not always easy to recognize them and quickly extract necessary information
- When you have lots of images the problem becomes really challenging
- When the image becomes corrupted it needs to be restored


# Project Description

We need to build the software that could:

- Recognize the objects on the picture based on assigned pattern
- Search for an object
- Provide statistics of recognized objects
- Reconstruct the picture
- Effectively process large number of files

# Functionality

User will be able to:

1. Set the pattern (e.g. circle, triangle, rectangle)
2. Identify the pattern by name
3. Recognize the object from the picture in several standard formats (JPG, GIF, PNG)
4. Reconstruct the recognized object (if needed)
5. Provide statistics of the pattern recognition
6. Enjoy the GUI interface 

# Applications

- Images search

## FindMe

- Experimental images recognition  
(colloidal particles, chemistry, biology, biometrics, astrophysics)

- Pictures processing

