Relation Nets One-Shot Testing

Lion

Monkey

Elephant

$$L \sim \mathcal{T}_{test}$$

$$Q \sim L$$

Elephant

Monkey

Relation
Module

●	◆ : 0.1
●	◆ : 0.3
●	◆ : 0.8

$$S \sim L$$

$f_\varphi(image)$

$g_\varphi(e_1, e_2)$

Embedding Module

Relation Nets One-Shot Testing

$L \sim \mathcal{T}_{test}$

$S \sim L$

$Q \sim L$

Lion

Elephant

Monkey

$f_{\varphi}(image)$

Embedding Module

Lion

Elephant

Monkey

$g_{\varphi}(e_1, e_2)$

Relation Module

: 0.9
: 0.2
: 0.1

: 0.1
: 0.3
: 0.8
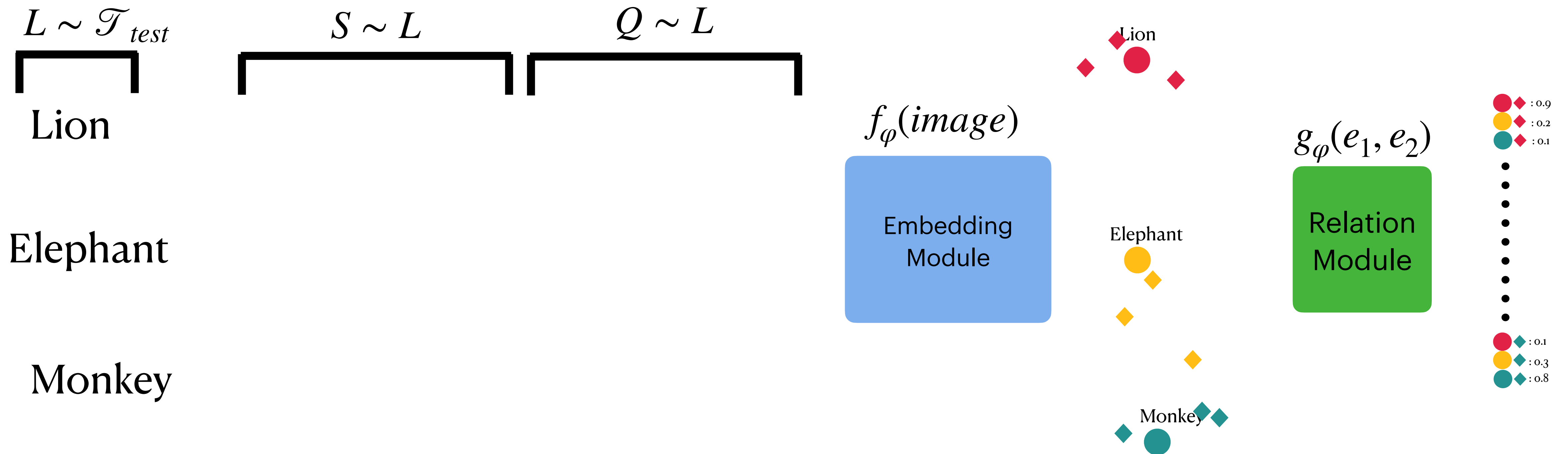
Zero-Shot Learning (1)

Zero-shot learning is analogous to one-shot. However instead of being given a sample set with an image for each of C training classes, it contains a **semantic class embedding** vector v_c for each.

Bird
A small, lightweight creature with a streamlined body, feathered wings...

Dog
A medium-sized animal with a muscular build, short fur, floppy ears...

Monkey
A slender, agile primate with long limbs, a prehensile tail, expressive face...

Attribute Embedding Module

Image Embedding Module