

Questions for paper 10 and 11

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Residual Networks Behave Like Ensembles of Relatively Shallow Networks

1. What are the concluding results of Residual networks that are worth noting?
 - a. Residual networks is viewed as a collection of paths (Unraveled View)
 - b. The paths are jointly trained and do not strongly depend on each other (lesion study) and Performance of residual networks correlates with the number of valid paths (deleted or reordered paths).
 - c. Paths through the network that is contributing gradient during training are shorter (path length follow binomial distribution).
 - d. All the above

Answer d. All the above

Dynamic Routing between capsules

1. How is a active capsules prepared for dynamic routing?
 - a. Group of neurons whose activity vector represent the instantiation parameters of a specific type of entity such as object or object type is selected as a capsule
 - b. The length of the activity vector is determined to represent the probability that the entity exists and its orientation to represent the instantiation parameters. (using non-linear function squashing)
 - c. Active capsules make predictions via transformation matrices for instantiating parameters for the higher level and when many predictions agree, the higher level becomes active.
 - d. All the above

Answer: d