Introduction to deep learning

Fall/Winter 2020-2021

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##                            ##
##   Deep Learning in Python   ##
##                            ##
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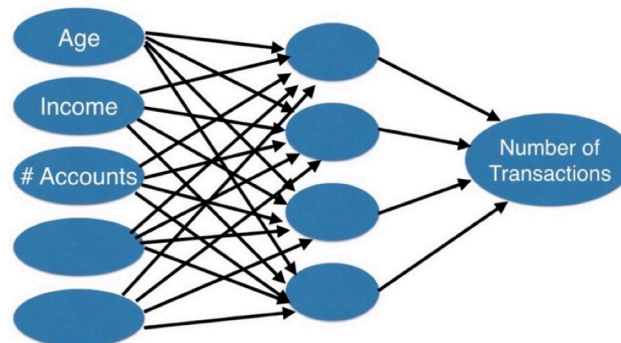§1 Introduction to Deep Learning in Python

§1.1 Basics of deep learning and neural networks

§1.1.1 Introduction to deep learning

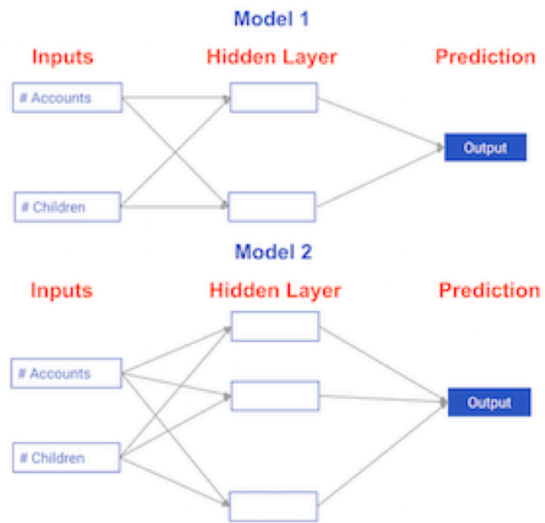**1. What is the value of interactions for neural networks?**

Deep learning uses especially powerful neural networks with almost anything such as *text*, *images*, *videos*, *audio*, or *source code* because neural networks really well account for interactions.

2. How do interactions work in neural networks?

3. Practice question for comparing neural network models to classical regression models:

Which of the models in the diagrams has greater ability to account for interactions?

Model 1

| Inputs | Hidden Layer | Prediction |

Accounts

Children

Output

Model 2

| Inputs | Hidden Layer | Prediction |

Accounts

Children

Output

☐ Model 1.

☒ Model 2.

☐ They are both the same.