NEURAL NETWORKS

a **machine learning** classifier for handwritten numbers

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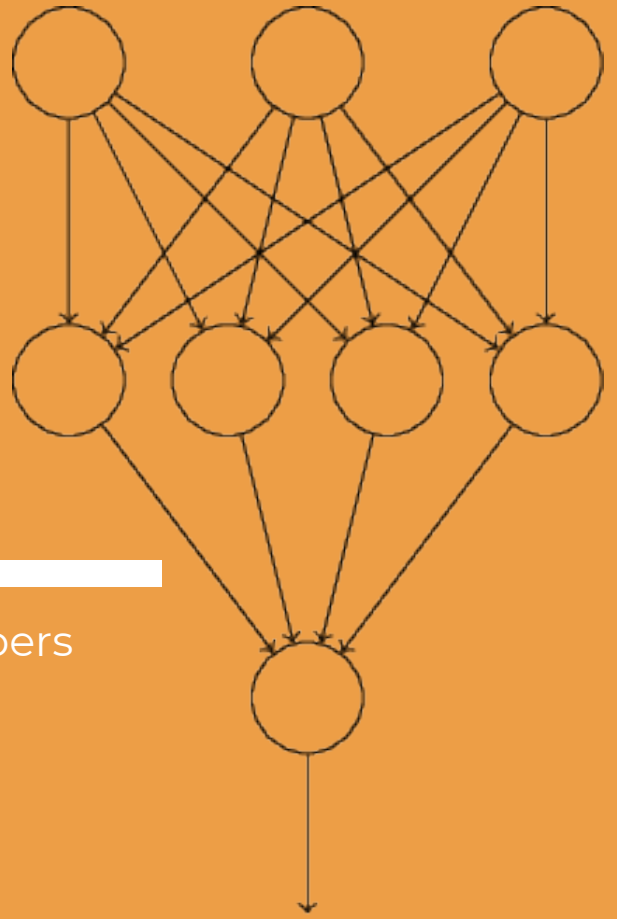

MINIMUM VIABLE PRODUCT

- To understand and implement a neural network (NN)
- Allow for user modifications of the testing dataset
- Using NN to classify the MNIST dataset of handwritten numbers
- Display the accuracy of the neural network's classification
- **FURTHER STEPS**
  - Implementation of successful user input for demo purposes
  - Save and load a trained network
  - Creating a tSNE display

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IMPLEMENTATION

LIBRARIES

- random
- numpy
- pickle
- gzip
- sciPy → misc
- json
- sys

CHALLENGES

- Understanding the python functions and math used in the algorithm
- Finding the individual output from each image that contributes to the accuracy rate
- Discovering the exact pattern of the data structures of the input
- Implementing user input facility
- Implementing new libraries

RESULTS & METHODS