

# Neural Network Visualizer Web App with Python

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**Abstract:** *The NN Visualizer is an interactive web-based application designed to demystify the workings of artificial NNs by offering an intuitive platform to explore how trained models process and classify handwritten digits from the MNIST dataset. Utilizing a fully connected NN built with TensorFlow and Keras, the visualization component, created with Streamlit, allows users to observe real-time activation patterns across network layers. A Flask-based server ensures efficient data handling and model predictions. Key features include layer-by-layer activation visualization, real-time predictions, and a user-friendly interface, making it a valuable educational tool. This project enhances transparency in AI, supporting trends in responsible AI development by providing insights into the internal representations learned by NNs.*

**Keywords:** NN Visualization, MNIST Dataset, Deep Learning, TensorFlow, Keras