

Algorithm: Adam Batch size: 2000 learning rate: 0.005 Epochs: 20

(Added one more fully connected layer (576->64->10) and normalized the input data in the preprocessing step)

Epoch 1:

Accuracy on batch 1: 0.091 [182/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.119 [238/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.112 [224/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.121 [242/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.221 [442/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.271 [543/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.243 [486/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.393 [786/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.354 [707/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.577 [1154/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.580 [1159/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.580 [1159/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.561 [1123/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.597 [1194/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.661 [1323/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.681 [1363/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.681 [1362/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.686 [1372/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.696 [1391/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.724 [1449/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.724 [1447/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.737 [1474/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.745 [1490/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.748 [1496/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.768 [1536/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.781 [1562/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.769 [1539/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.772 [1545/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.799 [1598/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.798 [1596/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.806 [8057/10000]

Epoch 2:

Accuracy on batch 1: 0.791 [1582/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.827 [1653/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.828 [1655/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.817 [1634/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.834 [1667/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.833 [1666/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.825 [1650/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.853 [1705/2000] (progress of the epoch: 0.27)

Accuracy on batch 9: 0.851 [1702/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.869 [1737/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.864 [1728/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.883 [1766/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.883 [1766/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.874 [1748/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.893 [1787/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.890 [1781/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.897 [1794/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.891 [1782/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.897 [1795/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.912 [1825/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.904 [1808/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.911 [1822/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.925 [1850/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.925 [1850/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.921 [1843/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.927 [1855/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.929 [1858/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.938 [1876/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.931 [1862/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.941 [1882/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.938 [9375/10000]

Epoch 3:

Accuracy on batch 1: 0.928 [1856/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.950 [1899/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.944 [1888/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.943 [1885/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.951 [1901/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.939 [1878/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.947 [1893/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.954 [1908/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.948 [1895/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.946 [1891/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.948 [1896/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.953 [1906/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.957 [1913/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.947 [1893/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.951 [1902/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.956 [1912/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.954 [1907/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.956 [1912/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.959 [1918/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.961 [1922/2000] (progress of the epoch: 0.67)

Accuracy on batch 21: 0.959 [1917/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.955 [1909/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.966 [1931/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.961 [1921/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.952 [1904/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.970 [1939/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.966 [1932/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.966 [1931/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.968 [1935/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.965 [1930/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.967 [9673/10000]

Epoch 4:

Accuracy on batch 1: 0.971 [1941/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.962 [1923/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.976 [1951/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.969 [1937/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.973 [1946/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.958 [1916/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.964 [1927/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.968 [1935/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.967 [1934/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.963 [1925/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.966 [1932/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.969 [1937/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.969 [1938/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.967 [1933/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.967 [1934/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.973 [1945/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.972 [1944/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.969 [1938/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.969 [1937/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.974 [1948/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.970 [1939/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.978 [1955/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.975 [1949/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.982 [1963/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.972 [1944/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.973 [1946/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.977 [1954/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.975 [1950/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.972 [1944/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.971 [1941/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.976 [9761/10000]

Epoch 5:

Accuracy on batch 1: 0.976 [1951/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.977 [1953/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.978 [1956/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.972 [1943/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.976 [1951/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.981 [1962/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.978 [1955/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.979 [1958/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.974 [1947/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.980 [1960/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.976 [1952/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.984 [1967/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.974 [1948/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.981 [1961/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.977 [1953/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.981 [1962/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.983 [1966/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.979 [1958/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.976 [1951/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.977 [1953/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.971 [1942/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.976 [1952/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.976 [1952/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.979 [1957/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.980 [1959/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.981 [1961/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.977 [1954/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.977 [1954/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.979 [1957/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.980 [1960/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.981 [9814/10000]

Epoch 6:

Accuracy on batch 1: 0.977 [1954/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.980 [1960/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.980 [1960/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.979 [1958/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.979 [1958/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.982 [1963/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.984 [1968/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.976 [1952/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.985 [1970/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.977 [1954/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.981 [1961/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.983 [1966/2000] (progress of the epoch: 0.40)

Accuracy on batch 13: 0.980 [1960/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.980 [1960/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.976 [1952/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.984 [1968/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.978 [1956/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.981 [1962/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.983 [1966/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.989 [1978/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.981 [1962/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.985 [1970/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.984 [1968/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.987 [1974/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.989 [1977/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.982 [1963/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.982 [1963/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.984 [1967/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.988 [1975/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.990 [1979/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.984 [9836/10000]

Epoch 7:

Accuracy on batch 1: 0.986 [1972/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.985 [1970/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.987 [1973/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.985 [1970/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.980 [1959/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.987 [1974/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.984 [1967/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.982 [1963/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.985 [1969/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.977 [1954/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.985 [1969/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.986 [1971/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.988 [1976/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.989 [1977/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.984 [1967/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.987 [1973/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.986 [1971/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.987 [1974/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.990 [1979/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.989 [1977/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.980 [1960/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.981 [1961/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.982 [1963/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.987 [1974/2000] (progress of the epoch: 0.80)

Accuracy on batch 25: 0.988 [1976/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.986 [1971/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.988 [1975/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.988 [1976/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.983 [1966/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.989 [1977/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.987 [9874/10000]

Epoch 8:

Accuracy on batch 1: 0.990 [1980/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.988 [1976/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.991 [1982/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.984 [1968/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.984 [1968/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.989 [1977/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.989 [1978/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.991 [1981/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.983 [1966/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.988 [1975/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.988 [1976/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.989 [1978/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.991 [1981/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.988 [1975/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.983 [1966/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.989 [1977/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.993 [1985/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.984 [1968/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.984 [1968/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.986 [1971/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.990 [1980/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.992 [1984/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.990 [1980/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.988 [1976/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.989 [1978/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.991 [1981/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.988 [1976/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.989 [1978/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.987 [1974/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.987 [1974/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.987 [9866/10000]

Epoch 9:

Accuracy on batch 1: 0.990 [1979/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.988 [1976/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.988 [1975/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.993 [1986/2000] (progress of the epoch: 0.13)

Accuracy on batch 5: 0.989 [1977/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.988 [1976/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.989 [1978/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.989 [1977/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.991 [1982/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.984 [1967/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.988 [1975/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.993 [1985/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.989 [1978/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.992 [1983/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.987 [1974/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.994 [1987/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.991 [1982/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.990 [1979/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.988 [1976/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.991 [1982/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.988 [1976/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.993 [1985/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.990 [1980/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.990 [1979/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.990 [1980/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.986 [1972/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.990 [1980/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.990 [1980/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.992 [1984/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.987 [1974/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.990 [9896/10000]

Epoch 10:

Accuracy on batch 1: 0.991 [1982/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.992 [1983/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.993 [1985/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.990 [1979/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.991 [1982/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.990 [1979/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.989 [1977/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.988 [1976/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.995 [1989/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.995 [1989/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.987 [1974/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.991 [1982/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.993 [1985/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.993 [1985/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.990 [1980/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.990 [1979/2000] (progress of the epoch: 0.53)

Accuracy on batch 17: 0.996 [1992/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.986 [1972/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.991 [1982/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.993 [1986/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.992 [1984/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.990 [1980/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.993 [1985/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.994 [1988/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.991 [1981/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.991 [1981/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.992 [1984/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.994 [1987/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.988 [1976/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.992 [1983/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.990 [9897/10000]

Epoch 11:

Accuracy on batch 1: 0.994 [1987/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.994 [1988/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.992 [1984/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.992 [1983/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.993 [1986/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.989 [1978/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.990 [1979/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.992 [1984/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.992 [1984/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.993 [1985/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.992 [1984/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.993 [1985/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.992 [1984/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.994 [1987/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.993 [1985/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.996 [1991/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.997 [1993/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.991 [1982/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.991 [1981/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.991 [1982/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.994 [1987/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.990 [1980/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.994 [1987/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.994 [1987/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.991 [1982/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.990 [1980/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.988 [1976/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.993 [1985/2000] (progress of the epoch: 0.93)

Accuracy on batch 29: 0.993 [1986/2000] (progress of the epoch: 0.97)

Accuracy on batch 30: 0.994 [1988/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.990 [9904/10000]

Epoch 12:

Accuracy on batch 1: 0.994 [1987/2000] (progress of the epoch: 0.03)

Accuracy on batch 2: 0.994 [1987/2000] (progress of the epoch: 0.07)

Accuracy on batch 3: 0.994 [1988/2000] (progress of the epoch: 0.10)

Accuracy on batch 4: 0.990 [1979/2000] (progress of the epoch: 0.13)

Accuracy on batch 5: 0.994 [1987/2000] (progress of the epoch: 0.17)

Accuracy on batch 6: 0.992 [1984/2000] (progress of the epoch: 0.20)

Accuracy on batch 7: 0.995 [1989/2000] (progress of the epoch: 0.23)

Accuracy on batch 8: 0.994 [1988/2000] (progress of the epoch: 0.27)

Accuracy on batch 9: 0.992 [1983/2000] (progress of the epoch: 0.30)

Accuracy on batch 10: 0.992 [1983/2000] (progress of the epoch: 0.33)

Accuracy on batch 11: 0.994 [1987/2000] (progress of the epoch: 0.37)

Accuracy on batch 12: 0.992 [1983/2000] (progress of the epoch: 0.40)

Accuracy on batch 13: 0.992 [1984/2000] (progress of the epoch: 0.43)

Accuracy on batch 14: 0.993 [1985/2000] (progress of the epoch: 0.47)

Accuracy on batch 15: 0.991 [1982/2000] (progress of the epoch: 0.50)

Accuracy on batch 16: 0.992 [1984/2000] (progress of the epoch: 0.53)

Accuracy on batch 17: 0.993 [1986/2000] (progress of the epoch: 0.57)

Accuracy on batch 18: 0.991 [1982/2000] (progress of the epoch: 0.60)

Accuracy on batch 19: 0.995 [1990/2000] (progress of the epoch: 0.63)

Accuracy on batch 20: 0.993 [1986/2000] (progress of the epoch: 0.67)

Accuracy on batch 21: 0.991 [1982/2000] (progress of the epoch: 0.70)

Accuracy on batch 22: 0.994 [1987/2000] (progress of the epoch: 0.73)

Accuracy on batch 23: 0.994 [1988/2000] (progress of the epoch: 0.77)

Accuracy on batch 24: 0.994 [1987/2000] (progress of the epoch: 0.80)

Accuracy on batch 25: 0.990 [1979/2000] (progress of the epoch: 0.83)

Accuracy on batch 26: 0.998 [1995/2000] (progress of the epoch: 0.87)

Accuracy on batch 27: 0.991 [1982/2000] (progress of the epoch: 0.90)

Accuracy on batch 28: 0.992 [1984/2000] (progress of the epoch: 0.93)

Accuracy on batch 29: 0.998 [1995/2000] (progress of the epoch: 0.97)

Accuracy on batch 30: 0.994 [1987/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.991 [9906/10000]

Epoch 13:

Accuracy on batch 1: 0.997 [1993/2000] (progress of the epoch: 0.03)

Accuracy on batch 2: 0.994 [1988/2000] (progress of the epoch: 0.07)

Accuracy on batch 3: 0.996 [1991/2000] (progress of the epoch: 0.10)

Accuracy on batch 4: 0.994 [1988/2000] (progress of the epoch: 0.13)

Accuracy on batch 5: 0.997 [1994/2000] (progress of the epoch: 0.17)

Accuracy on batch 6: 0.998 [1996/2000] (progress of the epoch: 0.20)

Accuracy on batch 7: 0.989 [1978/2000] (progress of the epoch: 0.23)

Accuracy on batch 8: 0.994 [1988/2000] (progress of the epoch: 0.27)

Accuracy on batch 9: 0.995 [1989/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.993 [1986/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.994 [1987/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.995 [1989/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.996 [1991/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.992 [1984/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.992 [1984/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.992 [1984/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.995 [1989/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.993 [1985/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.993 [1986/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.993 [1986/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.995 [1989/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.993 [1985/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.993 [1986/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.994 [1988/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.990 [1979/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.993 [1986/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.996 [1991/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.993 [1986/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.993 [1986/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.997 [1993/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.990 [9896/10000]

Epoch 14:

Accuracy on batch 1: 0.994 [1987/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.995 [1989/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.996 [1991/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.993 [1986/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.994 [1987/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.994 [1987/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.996 [1991/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.995 [1990/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.996 [1991/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.996 [1992/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.992 [1984/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.995 [1990/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.997 [1994/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.993 [1985/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.994 [1987/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.996 [1992/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.994 [1987/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.998 [1995/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.998 [1996/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.994 [1987/2000] (progress of the epoch: 0.67)

Accuracy on batch 21: 0.996 [1991/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.994 [1988/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.992 [1984/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.997 [1994/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.992 [1983/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.993 [1986/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.996 [1991/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.994 [1987/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.992 [1984/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.995 [1990/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.992 [9915/10000]

Epoch 15:

Accuracy on batch 1: 0.995 [1989/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.997 [1993/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.995 [1989/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.997 [1993/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.994 [1987/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.996 [1991/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.996 [1992/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.996 [1992/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.998 [1995/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.995 [1989/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.993 [1986/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.996 [1991/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.997 [1994/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.994 [1988/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.994 [1988/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.996 [1991/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.995 [1989/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.994 [1987/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.995 [1990/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.994 [1988/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.994 [1988/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.989 [1978/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.996 [1992/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.995 [1989/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.994 [1988/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.996 [1992/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.994 [1988/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.994 [1987/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.997 [1993/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.994 [1987/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.992 [9921/10000]

Epoch 16:

Accuracy on batch 1: 0.997 [1994/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.996 [1992/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.995 [1989/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.995 [1989/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.995 [1990/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.997 [1993/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.995 [1990/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.995 [1990/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.997 [1993/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.993 [1986/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.997 [1993/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.996 [1991/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.997 [1993/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.997 [1993/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.995 [1989/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.993 [1986/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.993 [1986/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.993 [1985/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.996 [1991/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.997 [1994/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.997 [1993/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.993 [1985/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.996 [1992/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.993 [1985/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.994 [1988/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.993 [1986/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.997 [1993/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.995 [1989/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.993 [1986/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.997 [1994/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.991 [9912/10000]

Epoch 17:

Accuracy on batch 1: 0.996 [1992/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.997 [1994/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.995 [1990/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.990 [1980/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.994 [1988/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.994 [1987/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.998 [1995/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.995 [1989/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.996 [1992/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.995 [1990/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.994 [1987/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.995 [1989/2000] (progress of the epoch: 0.40)

Accuracy on batch 13: 0.995 [1989/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.993 [1986/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.994 [1987/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.994 [1987/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.996 [1992/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.996 [1991/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.992 [1984/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.993 [1986/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.996 [1991/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.997 [1994/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.996 [1992/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.995 [1989/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.992 [1983/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.997 [1994/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.998 [1995/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.994 [1987/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.997 [1993/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.994 [1988/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.991 [9912/10000]

Epoch 18:

Accuracy on batch 1: 0.998 [1995/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.994 [1988/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.997 [1993/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.996 [1992/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.995 [1989/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.994 [1987/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.996 [1992/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.990 [1979/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.994 [1987/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.998 [1995/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.995 [1990/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.995 [1990/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.998 [1996/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.995 [1989/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.996 [1992/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.999 [1997/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.997 [1994/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.997 [1994/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.996 [1991/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.995 [1989/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.997 [1994/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.994 [1988/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.992 [1984/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.997 [1993/2000] (progress of the epoch: 0.80)

Accuracy on batch 25: 0.995 [1990/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.998 [1996/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.994 [1987/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.995 [1989/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.999 [1997/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.996 [1992/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.993 [9926/10000]

Epoch 19:

Accuracy on batch 1: 0.996 [1992/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.995 [1989/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.997 [1994/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.996 [1992/2000] (progress of the epoch: 0.13)
Accuracy on batch 5: 0.995 [1990/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.996 [1992/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.997 [1993/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.998 [1995/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.997 [1993/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.995 [1990/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 0.997 [1993/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.995 [1990/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.999 [1997/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.998 [1995/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.996 [1991/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.998 [1995/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.996 [1991/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.998 [1995/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.996 [1992/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.996 [1992/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.999 [1998/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.998 [1995/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.996 [1992/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.997 [1994/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.994 [1988/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.997 [1993/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.996 [1991/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.999 [1997/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.995 [1990/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.994 [1988/2000] (progress of the epoch: 1.00)

Accuracy on test data: 0.992 [9917/10000]

Epoch 20:

Accuracy on batch 1: 0.997 [1993/2000] (progress of the epoch: 0.03)
Accuracy on batch 2: 0.998 [1996/2000] (progress of the epoch: 0.07)
Accuracy on batch 3: 0.998 [1996/2000] (progress of the epoch: 0.10)
Accuracy on batch 4: 0.997 [1994/2000] (progress of the epoch: 0.13)

Accuracy on batch 5: 0.997 [1994/2000] (progress of the epoch: 0.17)
Accuracy on batch 6: 0.992 [1984/2000] (progress of the epoch: 0.20)
Accuracy on batch 7: 0.997 [1993/2000] (progress of the epoch: 0.23)
Accuracy on batch 8: 0.999 [1997/2000] (progress of the epoch: 0.27)
Accuracy on batch 9: 0.996 [1992/2000] (progress of the epoch: 0.30)
Accuracy on batch 10: 0.995 [1989/2000] (progress of the epoch: 0.33)
Accuracy on batch 11: 1.000 [1999/2000] (progress of the epoch: 0.37)
Accuracy on batch 12: 0.998 [1995/2000] (progress of the epoch: 0.40)
Accuracy on batch 13: 0.998 [1996/2000] (progress of the epoch: 0.43)
Accuracy on batch 14: 0.995 [1989/2000] (progress of the epoch: 0.47)
Accuracy on batch 15: 0.996 [1992/2000] (progress of the epoch: 0.50)
Accuracy on batch 16: 0.999 [1997/2000] (progress of the epoch: 0.53)
Accuracy on batch 17: 0.997 [1993/2000] (progress of the epoch: 0.57)
Accuracy on batch 18: 0.998 [1996/2000] (progress of the epoch: 0.60)
Accuracy on batch 19: 0.999 [1997/2000] (progress of the epoch: 0.63)
Accuracy on batch 20: 0.997 [1994/2000] (progress of the epoch: 0.67)
Accuracy on batch 21: 0.999 [1997/2000] (progress of the epoch: 0.70)
Accuracy on batch 22: 0.994 [1987/2000] (progress of the epoch: 0.73)
Accuracy on batch 23: 0.996 [1991/2000] (progress of the epoch: 0.77)
Accuracy on batch 24: 0.994 [1987/2000] (progress of the epoch: 0.80)
Accuracy on batch 25: 0.994 [1988/2000] (progress of the epoch: 0.83)
Accuracy on batch 26: 0.998 [1996/2000] (progress of the epoch: 0.87)
Accuracy on batch 27: 0.997 [1994/2000] (progress of the epoch: 0.90)
Accuracy on batch 28: 0.995 [1989/2000] (progress of the epoch: 0.93)
Accuracy on batch 29: 0.997 [1994/2000] (progress of the epoch: 0.97)
Accuracy on batch 30: 0.997 [1993/2000] (progress of the epoch: 1.00)
Accuracy on test data: 0.993 [9925/10000]